

TEACHER FORMATIVE ASSESSMENT: INFLUENCES AND PRACTICE
CASE STUDY RESEARCH AT THE YEAR ONE LEVEL

S. M. ELLIOTT

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Curriculum Studies Department

Institute of Education, University of London.

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the spine.

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“To learn structure is to learn how things are related.”

Jerome Bruner

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Abstract

This case study research investigated the formative assessment practices of four Year One teachers in one local education authority, and the influences which have shaped their skills. School-level contextual factors such as the role of colleagues, the head teacher, and experience in the classroom were investigated through interview and questionnaire. External influences on teacher practice, most specifically the influence of the National Curriculum and its assessment requirements, were also examined. The findings identified experience in the classroom and colleagues as key sources of influence on practice.

The study reviewed the current understanding of formative assessment from a social-constructivist perspective on learning. Research has illustrated specific elements of formative assessment practice, including the development of learning goals, communicating criteria, feedback, and the role of discourse. In this research, questioning emerged as a vital formative assessment skill. Underpinning the practice of the teachers who demonstrated the widest range of strategies were three key features. These teachers were reflective about their own daily practice, and demonstrated a problem-solving approach to teaching and learning. Lastly, they had established a collegial relationship of shared power in which pupil and teacher thinking processes and ideas could be expressed and exchanged..

Theory has pointed to formative assessment as a teacher practice embedded in planning, teaching and assessing. Case study data were analysed to describe the practices of the teachers and to understand the ways in which formative assessment strategies might be linked together. A model of integrated practice is developed from the analysis, useful for teacher development and further research.

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professional skills, not only as teachers, but as assessors of children's achievement.

Assessment was seen at that time by the Conservative government in Britain as a means of establishing and maintaining higher, more consistent standards for the entire education system. The conflict between those in power who desired summative assessment for accountability purposes, and those in education who desired formative assessment for learning, created tension throughout the development of the National Curriculum and during its implementation. Given that the data for this research study was collected in 1994, the advent of the National Curriculum must be seen as a macro-level contextual factor for this research study when analysing teacher formative assessment practices at the school level.

Focus of the Study

The principal focus of this school-based inquiry is to develop a working model of teachers' strategies fundamental to the practice of formative assessment, by combining theoretical knowledge and analysis of multi-case study data drawn from Year One teachers at work in their classrooms.

The review of literature surveys current thinking on formative assessment from a wide range of theoretical perspectives. This was done to account for the fact that interest in the potential learning effects to be gained from effective formative assessment has been the focus of research in various fields, including cognitive psychology, measurement theory, curriculum design and learning theory. Of particular relevance to this study are the findings drawn from social-constructivist learning theory, establishing the understanding that knowledge is constructed by the learner through the social interaction within a specific cultural setting. Furthermore, research has recently established several

essential features of the formative assessment process, including the development of learning criteria, types and range of feedback and the centrality of pupil-teacher discourse to the formative assessment process. This study attempts to incorporate what is now known about these separate but key aspects of formative assessment and to use the qualitative and quantitative data collected from observations, interviews, questionnaires and documents collected from the case study schools to establish how strategies might be integrated into teaching. Case study data is therefore analysed according to grounded theory (Glaser and Strauss, 1967) in an attempt to reveal the links between strategies within the teaching, planning and assessing phases of teacher work.

Secondly, to analyse formative assessment strategies embedded within the planning, teaching and assessing phases of teachers' work, this research study investigates the school-based factors which could have an impact on practice. The review of the literature on assessment and teacher's work given in Chapter One identifies three sources of influence on teacher practice at the micro-level of the classroom; the head teacher, other staff members and colleagues within the school and the teacher's background, including experience in the classroom. In addition, curriculum experts who participated in the writing of the National Curriculum indicated in interview that the criterion-referenced Statements of Attainment were designed to influence teacher assessment practices. Finally, In-service Training (INSET) was identified as a possible source of influence on practice both by the literature on teacher development, and by the INSET instructors interviewed for this study. INSET was also identified by the National Curriculum designers as an essential means of developing teacher understanding of the new curriculum and its assessment requirements. INSET was thought to be an important conduit of information and training; an essential

link between the National Curriculum initiatives and the teachers at work in schools.

To summarise, a qualitative research methodology based on case study research is used in this study to uncover and describe the links between formative assessment strategies identified in the literature in the planning, teaching and assessing phases of teacher work. Over the course of a school year, I visited 4 schools in one LEA, conducting case study investigations of the year one teacher in each school. I made detailed notes based on interviews, transcripts from audio-recordings, documents collected from the teacher on planning, teaching and assessing. The data was analysed in order to understand how formative assessment might be embedded into the teacher's work. A model of practices was developed, modified and refined using the method of constant comparison over the course of the case studies. In addition, I interviewed the assessment co-ordinator in each school to gather information on the assessment policies and practices advocated by the school. Questionnaires were completed by all the school teaching staff providing data on their understanding and practice of formative assessment. The head teacher and the Year Two teacher of each school were also interviewed to further develop my understanding of the school context. Questionnaire and interview data provided information about the factors within the school and beyond the school which might influence teacher practice of formative assessment. The research questions directing the study are given here and are described more fully in chapters one and two.

1. According to the teachers interviewed and surveyed in the study, what sources of influence have contributed most to their formative assessment practice: curriculum, head teachers, INSET, colleagues and/or experience in the classroom?

2. Did the teachers use the Statements of Attainment given in the National Curriculum for formative assessment purposes? Did they use the Statements of Attainment for other purposes in their work?
3. What formative assessment strategies are practised by the case study teachers? In what ways are formative assessment strategies integrated into the teaching, planning and assessing phases of the teachers' work?

Thesis Structure

Chapter One

In the opening chapter, I describe the key factors which might influence the school and classroom context. Three macro-level factors are discussed first. The political context, the role of the curriculum and the role of INSET were investigated through analysis of reports, research, government documents and interviews with members of the National Curriculum working parties and other curriculum experts. Information on the influence of in-service training given by the Local Education Authority (LEA) and teacher training institutions was developed from literature review, interviews, and participation in-service workshops. This section is followed by an examination of the possible sources of influence on formative assessment at the micro-level, including the role of the head teacher, colleagues, teacher experience and biography. The selection of these sources of influences was again developed from the literature on teacher's professional knowledge. Additional information for the first chapter was also gathered from a pilot study conducted in a Year One classroom prior to the data collection period. (See Figures 1.1-1.3)

Chapter Two

Here, the review of the current literature and research investigates formative assessment to establish an understanding of the learning theory and the pedagogic strategies associated with it. An initial framework of formative assessment strategies derived from the literature is included, following the review. The research questions for the case study investigation are given at the end of this chapter.

Chapter Three

A methodology chapter outlines the procedures used in the collection of data and the results of the pilot project.

Chapters Four, Five, Six

Each of these chapters describes a case study conducted at a primary school. At the end of each chapter themes and inferences are examined. Throughout the cases, a model of integrated practice is gradually developed, revised and refined.

Chapter Seven

A summary of the findings for the first two research questions is presented. The chapter includes a summary of the formative assessment strategies of each case study teacher. This is followed by cross-case study results and analyses. A discussion of the sources of influences on assessment practice is also given. The chapter concludes with questions for further research.

Chapter Eight

A model of Integrated Formative Assessment practice is given here. The chapter examines the development of the model and concludes with a discussion of teacher reflective thinking as it impacts on formative assessment.

Chapter Nine

In this chapter, the outcomes of the thesis are examined and interpreted. Finally, the contribution of the model to the knowledge and practice of formative assessment is discussed.

achieving this goal. He suggested clearly-defined curriculum objectives and assessment based what students were able to demonstrate rather than ranking students in order of score (Daugherty, 1995:7). The beginning of a nationally-defined curriculum was evident by this time, though no policy was set down until the late 1980s.

Developments leading to a new curriculum with criterion-referenced assessment of demonstrable skills and knowledge occurred during a period of conflicting conservative ideology. Government policy was influenced in fundamental ways by a small number of neo-conservative interest groups and “think tanks” such as the Hillgate Group, The Centre for Policy Studies, and the Institute of Economic Affairs. These groups promoted a “back to basics” vision of subject specialisation, directed by a prescriptive, criterion-referenced curriculum whose objectives could be easily measured. They advocated regular assessment for the purposes of selection, control and accountability (Moon, 1994). Lawton suggests that there is little ideological coherence in the Education Act. “It is a messy set of compromises between neo-liberal and neo-conservative policies.” (Lawton, 1992:49)

Assessment was itself a principal source of controversy. Innovations in assessment at the secondary level included Records of Achievement (RoA), Graded Assessment, and Course Work Assessment for the GCSE secondary examinations (Daugherty, 1995). All these schemes pointed away from high-stakes testing. The experts asked to design an assessment system for the National Curriculum met with opposition when they recommended assessment across 10 levels, involving both formative and summative assessment through a combination of teacher assessment and national tests. The concept of using teacher evaluations of student achievement was very reluctantly accepted by Mrs Thatcher, and became a source of on-going debate. “The idea of short and sharp ‘pencil and paper’ tests, favoured by some government politicians and all the right of centre ‘think tanks’, clearly clashed with the quest for more reliable

and valid instruments, that developments in assessment over the last decade suggested were required.” (Moon in Pollard and Bourne, 1994:182)

A constant criticism of the design of the National Curriculum has been that the model was in the first instance a politically motivated one, although reinforced by economic and social concern about standards. “The crucial link,” writes Blyth “between the political and educational elements is shown in the way in which the actual curriculum was designed. For it was first fashioned in the political context and then handed over for amplification not to the current experts in the field, who have subsequently come to be denounced as the ‘education establishment’, but in the first instance to civil servants.” It was they, “who drew up the broad guidelines of the curriculum and only then invited selected individuals to join the Working Parties.” (Blyth, 1991:93)

To be fair, this criticism may be overstated. The designers were often the best in their fields, and while the final documents were not everything they hoped, their essential concerns remained in evidence. And, despite the fact that the government hand-picked the working parties, in many cases, especially in English, they also appeared to select members with views antithetical to their own. The assessment policy of The Task Group on Assessment and Testing (TGAT (1988a) was published after the writers of English produced their curriculum, so their work was not influenced by the assessment philosophy of the government. This was not true for the maths and science writers who had read TGAT and had some knowledge of how the new National Curriculum would be structured and assessed.

It would be problematic to find a way to measure the influence of the political context on schools and specifically on the way schools adapted to changes in assessment requirements. Nevertheless, research has shown that school culture is affected by the forces outside its walls. Ball proposes two premises useful to the understanding of schools as social organisations. “Schools as organisations cannot be conceived of as independent from the environment;

second, that they cannot be analysed simply in terms of adaptations to that environment. The national and local state may operate to limit the range of possibilities available to teachers, but at the present time at least, they do not exercise absolute control within that range.” (1987:247) He comments that schools have “relative autonomy” circumscribed by the political imperatives and social pressures upon it. In light of the fact that a new National Curriculum had been imposed on teachers stressing conformity to new academic requirements including assessment, the influence of the political context must be considered as an important factor. As a result of the imposition of the TGAT model of assessment for the National Curriculum, teachers had to conduct regular assessments and gather information for reporting. They also had to prepare students for end of Key Stage assessments and conduct the tests in their classes.

II. The National Curriculum

In order to understand the rationale behind the National Curriculum and to understand how it was designed to influence teaching and teacher assessment, interviews were carried out with a curriculum designer from the English, Mathematics and Science curriculum working groups. A general outline of the overall curriculum design is provided first. Then the experts’ views of the design and intentions for the curriculum are discussed. These are explained under two headings: background on the design of the curriculum, and assessment in the subject.

Background Information on the National Curriculum

In 1988, the Secretary of State for Education passed the Education Reform Act (ERA). It was intended to raise the standards achieved in schools by establishing a common curriculum for all students. Subjects included three core subjects of English, Mathematics and Science, and six foundation subjects: History, Geography, Technology, Music, Art, Physical Education and a foreign language. These subjects are introduced at different year levels. Each subject of the National Curriculum was divided into a number of Attainment Targets (ATs)

which could be seen as assessment criteria at each of the levels. There were 10 levels of achievement outlined for each AT. These ATs are further specified into Statements of Attainment. The ATs could be grouped into profile components, for which there were programmes of study. The programmes of study defined the content used for planning topics or other schemes of work. A child's years in school, ages 5-16, were divided into four Key Stages for assessment purposes. National Assessments of seven-year-olds completing the Key Stage one, were implemented for the first time in 1991.

Ranges of levels of attainment targets for each Key Stage.

Key Stage 1- Levels 1-3 For children aged 5-7

Key Stage 2- Levels 2-5 For children aged 7-11

Key Stage 3- Levels 3-8 For children aged 11-14

Key Stage 4- Levels 3-10 For children aged 14-16

The assumption of the TGAT report was that most children at Key Stage 1 would achieve Level 2-Level 4 at Key Stage 2, Level 5-6 at Key Stage 3 and Level 6-7 at Key Stage 4. As a means of explaining the curriculum, programmes of study supplemented each of the subject orders; Section 2 of the Education Reform Act defines programmes of study as: "the matters, skills and processes which are required to be taught to pupils of different abilities and maturities during each key stage." The working parties developing the curriculum documents were told that the programmes of study were to help provide detailed descriptions of the content, skills and processes pupils need to be taught.

The National Curriculum and its model of assessment.

The Task Group on Assessment and Testing (TGAT 1988), chaired by Professor Paul Black, provided the framework for assessment of the National Curriculum. It advocated a mixture of standardised assessment measures and teacher ratings. The report suggested that such a combination would produce confidence in overall end of Key Stage results and prevent teaching narrowed to

teaching to the test. Standard Assessment Tasks (SATs) were designed to use a variety of methods including performance assessments, so that teachers could establish evidence of achievement and use the information gained to evaluate student learning. The assessments were to be based on the Attainment targets in the curriculum. The TGAT report argued that formative, summative, diagnostic and evaluative assessment information could be gathered through one assessment process. Both summative and formative evaluations of students were required. It was believed that a criterion-referenced curriculum model had the potential to help teachers to use both kinds of assessment. Formative assessment, a term used in the TGAT report but much misunderstood, was described as assessment “embedded within the very process of teaching and learning, and has little to do with national norms.” Formative assessment has to do with individual progress. In much of the commentary and research of the time, the tension between summative assessment for evaluation and formative assessment for learning was at the centre of the debate.

A Brief Analysis of the Three Core Subjects - Maths, Science and English

Before the publication of the TGAT report, subject working parties were created to write the National Curriculum for Science and Mathematics and later English. For this research project, three key curriculum designers were interviewed to gather information about the design of the curriculum, their ideas on the learning theory behind their work and their analyses of how the curriculum was to be implemented and assessed. Evidence can be found in this brief analysis of the curriculum through its writers that the theory of learning termed “constructivism” was in some way a part of the thinking for some of the designers of the National Curriculum. The importance of constructivism to the developing understanding of formative assessment practices is described in detail in Chapter Two.

1. Mathematics.

Background.

One of the principal members of the Mathematics Working party was Margaret Brown, then Reader in Mathematics Education, Centre for Educational Studies, King's College London. When involved in the curriculum writing in 1987, she felt the improvement of teacher assessment a kind of "mission" as a result of her research in pupil attainment. Her work in assessing attainment in maths showed a seven-year gap of achievement within any one class and she felt teachers were not aware of and certainly not addressing this range of ability in their class work. The theory of learning behind the maths working document was essentially a result of what was seen as good practice in classrooms across the country by the teachers and experts within the group, her own research and HMI reports.

Assessment in the mathematics curriculum.

Brown (1988) illustrates the attempt to re-interpret criterion-referencing for the purposes of learning as opposed to measurement. "There is [however] a contrast between Popham's notion of 'behaviours to be measured' in the American psychometric behaviourist tradition, and our characterisation of attainment targets as 'conceptually-based strategies', following a broadly Piagetian constructivist ideology." According to Brown, it is this ideology which informed her contributions to the National Curriculum as well as her research into the learning of mathematical concepts.

In the Maths working group, Brown was in the minority about the need for diagnostic or formative assessment. Principally, she felt the others could only see Statements of Attainment specifying content: the teachers in the maths group wanted a syllabus, not assessment. Conversely, Brown saw Statements of Attainment "as assessment tools", as part of the process of criterion-referencing. Influential to her view was the Cockcroft Report (1982), which recommended

developments such as practical work, problem solving and investigative tasks in the classroom.

The formative potential of criteria and levels did not come from these developments alone. Brown made the distinction between having assessment criteria, and setting objectives that were too narrow, too behaviouristic. Interestingly, only Paul Black from TGAT did not differentiate between the two in a strong way. And, in his review of summative and formative assessment issues, Black states, "In general, the criteria for mastery learning are identical for those of any good formative assessment scheme, and are very close to those for individualised learning programmes." (Black, 1993:74) The criteria for mastery learning are characterised by clear behavioural learning objectives. These are operationalised in learning activities which break down material into small learning units. Formative tests are linked to standards followed by remedial lessons and finally, summative tests at the end. But Black also criticised the "atomised" rather than "holistic" approach of mastery learning schemes, recognising that they can oversimplify the complexities of learning, especially in relation to progression.

In the first interim report made by the Mathematics Working Party, one key recommendation was that teachers need to acquire information about the strategies children use to solve a mathematical problem. Children develop their strategies in the process of completing the task, because the task offers an opportunity for learning as well as assessing. This is noted as part of good teacher practice. Assessment and learning occur within the same activity. In one project investigation, a task was designed to provide "information about children's understanding of capacity and to assess children's appreciation of where the notion of capacity arises in everyday life." (Interim Report:21) Here the task is designed to reveal the concepts held by children before they engage in a learning task; a principle in constructivist learning and teaching theory. The interim report claimed that observations made during the lesson are "more

reliable indicators of children's understanding than those obtained by written tests." The problems cited concerning these learning/ assessing models included the need for training in appreciating the strategies used by the children and the difficulty in obtaining information on all the children in the class. The researchers felt teacher questioning techniques in particular needed reinforcement through In-service Training of Teachers (INSET). Clearly, questioning is a professional skill required for teacher formative assessment.

The mathematics curriculum was designed with Statements of Attainment which included both content and thinking processes. The intention of the curriculum designers, including Brown, was to provide teachers with targets and levels of progression which could be used for both formative and summative assessments. But the programmes of study, and the curriculum itself, do not direct teachers in using the curriculum for formative purposes. The potential for formative assessment is evident, but it could not be assumed teachers would use it for ongoing, daily assessment and feedback into learning and planning.

2. Science

Background

Prof. Wynne Harlen, also interviewed for this study, spent at least a dozen years researching children's learning in science before becoming a principal member of the Science working group. She had worked with Paul Black of TGAT on various projects since 1977, most importantly on science curriculum materials which she called "constructivist materials". The National Curriculum Science and Maths working groups were operating at the same time as the writing of TGAT. Thus the early documents reveal the groups' principles of learning and instructional theory without the influence of the assessment requirements. But guidance for the specification of attainment targets and programmes of study came from the ever-present DES civil servants, whom Harlen addressed as their "minders". The working group had 19 members,

including well-recognised science and education experts such as Harlen and Prof. Rosalind Driver, as well as science lecturers and head teachers. There were no classroom teachers from any level of schooling, although many on the working party had had classroom experience.

In interview, Harlen was unequivocal about her belief in the constructivist view of learning. The report stresses that children's concepts, skills and attitudes are not developed as separate entities in the classroom. "They come into play together when pupils are engaged in scientific activities. We refer to these activities as learning experiences. The learning experiences are not prescribed within our framework. At the same time, we want our proposal to be helpful to teachers and relevant to their work. We therefore suggested criteria for the selection of learning experiences by teachers." (DES Science Interim Report, 1988 : 8-9)

Chapter Three of the Interim report outlines their view of science education. The underlying constructivist theory of learning is derived from its congruence to the methods and thinking of all scientists:

Faced with a new phenomenon, the scientist engages in a process in which he or she uses existing ideas to test out the new situation, and these ideas will then be modified or rejected if they do not help to explain the phenomenon. Learning in science proceeds in much the same way. A child brings ideas of his or her own to the classroom or laboratory, and the aim of science education is then to adapt to modify these original ideas so as to give them more explanatory power. Viewed from this perspective, it is important that we should take a child's initial ideas seriously so as to ensure that what emerges from them, and the evidence on which it is based, make sense to the child and are his own or her own. (DES Interim Report:18)

This passage has been quoted at length because there can be no stronger evidence that the intentions of the working group were to provide teachers with a curriculum based on a constructivist theory of learning. It was also intended to provide the teachers with opportunities to develop their own skill in formative assessment. There is an important role for the teacher as enabler in this process: the teacher may interact with the pupil, raise questions, build in appropriate challenges and offer new ways of thinking. Clearly the passage resonates with the idea that teachers must “scaffold” learning (Vygotsky, 1986). This way of working has implications for assessment in that the teacher needs to diagnose learning difficulties and to evaluate the progress children are making in order to plan future work.

The curriculum, as outlined in the Interim report, was not to be a syllabus of knowledge only, but would also include scientific skills and attitudes. As in Maths, attitudes were later dropped because they could not be measured or quantified satisfactorily. These and many other deletions and additions were made to the curriculum before it was passed into law.

Assessment in the science curriculum.

According to Harlen, the National Curriculum Attainment Targets have been useful in providing criteria to discuss achievement and to use when reporting progress. In her view the National Curriculum has done some of what it set out to do, that is, inform teachers’ judgements by helping them know the criteria. But in order to know the criteria teachers must use and understand the curriculum. The curriculum can be used for long and short term planning, but also for other school-based assessment activities. Some of these activities can include moderation discussions to develop teacher assessment judgements. In a moderation meeting, teachers discuss actual pieces of student work along with the criteria from the curriculum. Deciding on the level of achievement helps teachers articulate and give reasons for their judgements. Establishing consensus on achievement amongst staff through the moderation process provides a

means of coordinating and standardising evaluations. Other assessment activities include use of performance assessment tasks in class, as well as the development of school portfolios. Without opportunities to work with the curriculum, Statements of Attainment may be interpreted differently by teachers and cause confusion. This is where activities such consensus moderation could be important. "We share TGAT's view on the importance of moderation as an essential means of professional development for the teacher, and as an important mechanism by which common standards of assessment are achieved." (Science for Ages 5-16 , 1988, 6.42)

The importance of teacher assessment as determined by the science group is evident in the final report. In the document Science for Ages 5-14, it was suggested that 70 per cent of assessment should be done by teachers in the classroom using their own methods and judgements, with SATs or other external tests representing 30 per cent of the final evaluation. This changes to a 50/50 split at the GCSE level at 14-16 where selection, accreditation and accountability become more important. The high percentage of teacher assessment in the lower grades indicates the group's view of the importance of the teacher's role and their view that external tests have little relevance to the teaching/learning process.

To teach and assess the Science curriculum, schools frequently appointed science co-ordinators. Harlen noted in interview that the early SAT materials have been useful not only as assessment tasks, but as science INSET material; she rated this function of SATs as more important than their intended function of providing national standards and information to parents. She believes the SAT tasks helped teachers realise how an investigation could be set up to illustrate a particular concept and reveal the children's current understanding. This information can be used in discussions with the child and to inform planning. In Chapter Two, it will be shown that this information is a crucial part of formative assessment. The present research study chronicles the

details of teachers working with the science document to see if the intent of the science designers is in some way realised in teacher assessment. Giving teachers a curriculum as a tool to help them assess more effectively was a priority, but did it happen?

3. English

Background

The working party for the English curriculum, headed by Professor Brian Cox, began to work shortly after the publication of the Kingman Report (DES March, 1988). The Kingman report advocated teacher training and INSET that would provide a basic course in linguistics, to give teachers some understanding of the structures, meanings and conventions which govern written and verbal language. Without this, teachers could only be vague in making expert judgments about student work, imprecise in discussing the quality of student writing or oral communication, and shallow in explaining the excellence of exemplars selected from literature.

Some elements of a constructivist theory of learning can be inferred by these aims. Respect for the child's method of self-expression and the use of the "apprenticeship approach" reflect this. The constructivist principles are emphasised in the report's list of primary teacher skills as well. "The teacher needs respect for an interest in the learner's language, culture, thought and intentions, the ability to recognise growth points, strengths and potential, an appreciation that mistakes are necessary to learning, the confidence to maintain breadth, richness and variety, and to match these to the learner's interests and direction, and finally a sensitive awareness of when to intervene and when to leave alone." (DES, 1988 2.5)

Assessment in the English curriculum

The TGAT framework for assessment is quoted in the report of the group, English 5-11, making particular reference to the quote, "The assessment process itself should not determine what is to be taught and learned. It should be

the servant, not the master, of the curriculum. Yet it should not simply be a bolt-on addition at the end. Rather, it should be an integral part of the educational process, continually providing both 'feedback' and 'feedforward'." (TGAT para. 4) The English working group was particularly concerned that the assessment process should recognise the complex and non-linear ways in which language development and skill occurs and in "fields such as the arts where processes or aspects of performance were more difficult to appraise in isolation from the performance as a coherent whole." (English 5-11: section 7.1:30) Despite this caveat, they endorsed the principle of setting attainment targets and criterion-referencing.

At several junctures, most often in the programmes of study, the working party noted that the assessment skills required by the curriculum were new and unfamiliar to many teachers. They responded by stressing that teachers should be given training in assessment and in moderation methods. "We also recommend that there should be a central bank of special compiled examples for training in the moderation process." (English 5-11 section 8.33:39) According to Brian Cox, it was these recommendations, made in 1988, which should have been implemented at the outset of the NC implementation, but which were most neglected. Instead, the focus remained on SAT development and use, emphasising the summative assessment at the expense of the formative aspect.

Crucially, the English working party were not asked to develop any assessment strategies, a point which Cox thinks was, in retrospect, a major weakness. When he first went about the country speaking about the curriculum, assessment was the most frequently queried aspect. The writing party assumed that the SATs would be short and simple and that the bulk of the assessment would be done by teachers, as was done in some subjects for the GCSE's. When, in a speech by the prime minister, TA was reduced in GCSE grading importance from anywhere from 60 to 100 per cent down to 25 per cent, Cox despaired that the "power of the curriculum was how it was assessed." (Interview Jan., 1994)

He felt that his curriculum could not work without teacher assessment. When asked about teacher assessment skills, he noted that GCSE moderation and assessment procedures had had a great influence on improving teachers' ability to grade and communicate with pupils about their work, as well as improve overall grading consistency. He did not know about assessment skills in primary schools, however, and his working group showed a lack of experience at this level of schooling.

The examination given here of the National Curriculum shows that curriculum writers in the three core subject areas all accepted, and in fact advocated, the use of Statements of Attainment as part of a criterion-referenced model of curriculum design. However, for teachers this meant they had to assess against criteria and implement an unfamiliar model of curriculum. For teachers, especially at the primary level, the use of Statements of Attainment represented a tremendous shift in practice; a shift politically imposed upon them. This case study research project took place while teachers were in the process of implementing the National Curriculum and incorporating the use of Statements of Attainment into their teaching. It therefore must be considered as a source of influence on teacher formative assessment practices.

Changes to the Curriculum and the Dearing Report

The National Curriculum was made law by the Education Reform Act in 1988. Curriculum documents were written and in the primary schools in 1990. Teachers at all levels were frustrated by the swiftness of implementation and the lack of support and training they received. The first SATs were conducted in 1991, which gave rise to more discontent as teachers complained of the enormous amount of additional work the SATs required. The teachers at the secondary level were similarly distressed by the swift implementation of the curriculum and their loss of professional control over teaching and assessment. Discontent erupted into boycotts of the testing in 1993-4. As a result, the government decided to begin a comprehensive review of the design and content

of the National Curriculum. Sir Ronald Dearing (Dearing, 1993) undertook a daunting task; he was to provide consultation hearings, accept written submissions criticising all aspects of the National Curriculum and its Assessment arrangements as stipulated in TGAT, and write a report. In his July, 1993 interim report, he indicated that a “slimmed down” curriculum content and national testing system was warranted. There were also comments on the importance and quality of teacher assessment and the need to reduce the work connected with record-keeping. Recommendations were made against the use of tick sheets and boxes, as they were time-consuming and provided little information for teachers and were not useful for feedback for students.

The Dearing report recommended reducing the detail of the National Curriculum at the first three key stages, freeing up some 20 per cent of teaching time. The extra 20 per cent should be allocated to other NC subjects at the discretion of the school. One of the key aims was to improve teacher assessment through material produced by the School Curriculum and Assessment Authority (SCAA) and to provide test materials to be used by teachers when they needed to validate their own judgements. Teacher assessment could also be improved by use of moderation within the school developed with INSET and supervision. Nevertheless, the essentials of the design format were retained. “Teachers are clear that it is important to have a statement of what should be taught and no plausible alternative(s) to the key stage programme of study (which) has been advanced.” (Dearing, 1994 : 63 7.23) The report suggested rather that the Statements of Attainments made the system “over-elaborate,” which distorted subjects and fragmented teaching, resulting in assessment which ends up being “meaningless ticking of myriad boxes”. (Dearing, 1994)

The solution Dearing provided was the use of “descriptors”, which are defined as a “more integrated description of what a pupil must know, understand and be able to do at each level.” Dearing addresses the problem with over-elaboration and detail in criterion-referencing by attempting to write

descriptors which would concentrate on pupils' performances as a whole, but at the same time be specific enough to be used as a reliable assessment indicators. Work on new curriculum orders began at once. The preliminary, slimmed-down curriculum materials were circulating in primary schools by the end of the 1994 school year. Dearing recommended that these new orders not be changed for at least five years, recognising that the speed of change and implementation was a severely debilitating factor in the acceptance of the first NC orders.

III. INSET Training

Another contextual factor which might impact on teacher assessment practices was in-service training. With the introduction of the National Curriculum, many LEA's established the position of Assessment Co-ordinator. At the university level, instructors with expertise and research interests in assessment taught short courses for head teachers, school assessment co-ordinators and teachers. It was hoped that by training one or two staff members in assessment skills at short courses and one-day seminars, school assessment policies would be written and implemented.

Fullan (1979) would argue that this kind of in-service training is not enough to effect real change. He outlines seven reasons in-service training fails to support change in teachers. Three of these include:

1. One-shot workshops are widespread but ineffective.
2. Topics are frequently selected by people other than those for whom the training is intended.
3. Follow-up support for ideas and practices introduced in in-service programmes occurs only in a very small minority of cases. (Fullan, 1979:3)

INSET in the LEA of This Study

The teachers in this study were all from schools in the same LEA. As a way of providing context for the case study chapters, the INSET and access to

research on assessment available to these teachers has been outlined. Caroline Brown, the INSET co-ordinator for the LEA in this research study, was interviewed. She was responsible for providing in-service training in assessment for primary school teachers. In interview, she suggested that the support for teachers in making changes and developing policy was insufficient. Many of the INSET meetings were spent just trying to communicate the key issues of the national curriculum documents and to “help teachers cope” with the enormity of the changes. The co-ordinator said that the LEA “had an emphasis on Teacher Assessment and Recording, but teachers were reluctant to change and the meetings were often poorly attended.” Many teachers in the case study schools were unhappy with the INSET they got. During one data collection day, a teacher had just returned from a meeting and commented in the staff room that she felt the co-ordinator acted too much “like the inspector” and was telling them what to do. Some felt that an in-school meeting with the whole staff would be better than sending only one or two staff to the LEA office. A head teacher noted, “The teachers were very defensive, very anti-inspectorate. They feel they are doing it (assessment) right already.”

Shirley Clarke, INSET Co-ordinator for Assessment at the Institute of Education, combined research and practical skills in her short courses. Importantly, the courses focused on formative techniques rather than the summative. To gather data about teacher training in assessment, notes and documents were collected at one of her six-day courses. She explained in interview that she had been “commissioned” to do INSET. She was a maths advisor for the ILEA (Inner London Education Authority) and worked on a team developing SAT (Standard Assessment Task) material. After two years, the job of writing SATs went to NFER (National Foundation for Educational Research). She also wrote a Teacher’s Handbook for Maths Formative Assessment in the National Curriculum. Her view of the SATs was that they were “expensive INSET”. Teachers learned to use tasks and observation to assess children. “They

trained teachers to do better planning and provide more revealing learning tasks.”

In Clarke’s view, there were two major hindrances to better classroom assessment. First, the National Curriculum was overloaded and teachers were trying only for coverage. Secondly, LEAs promoted the use of tick box tracking sheets only as a means of monitoring progress. This narrowed teachers’ view of what assessment could be. She was concerned that assessment was seen as “an end of key stage level” instead of “on-going information”. Both these issues were addressed by the Dearing Report. Many teachers, then, were still perplexed by the summative-formative conflict, and were unsure what the practice of each really entailed.

In the evaluation of the National Curriculum at Key Stage 1 in 1990, (Shorrocks et al., ENCA, 1991: 232) the summary states that the most frequent comment made by head teachers and teachers was that they received too little training too late. They also felt that too much time had been spent on the details of administration rather than substantive assessment issues. One key example of this lack of training was that teachers revealed a “worrying variation of interpretation of key words and ideas.” There were problems in consistency of judgements in teacher assessment. The authors indicate that more agreement trailing or moderation of SAT materials, for instance, would establish a further point of local and national consistency. The only sources of interpretation of levels and scoring were the published School Examinations and Assessment Council (SEAC) materials and the INSET training provided at the LEA level.

The research and discussion in this section suggests that INSET has not had the substantial impact on teacher practice as might be predicted; the problem being that the training was too little, too administrative and too late. The case study research data provides more information on the importance of INSET as a source of influence on assessment practice.

Part Two: Micro-Level Factors

The following section provides a brief rationale of each of the school-level factors which might influence teacher practice. Although the classroom context is understood to be created by the teacher and the pupils, it may also be a product in part created by the head teacher, and by the influence of colleagues. The literature on teacher's work suggests that these largely sociological factors may have an impact on daily teaching and assessment practice. For this reason, items relating to school context were included in the data collected about each.

I. Teacher Background: Beliefs and the Nature of Teachers' Work

Exploration into the field of teachers' practical knowledge reveals several factors grouped into individual, institutional and cultural influences (Zeichner, Tabachnick and Densmore, 1987). Individual factors might include the training, philosophy of learning and experience of the teacher. Institutional and cultural influences refer to the staff and administration of a school as well as the students. Pollard, (1982) suggests that teachers develop coping strategies as creative responses to the constraints, opportunities and dilemmas posed by the immediate contexts of their own school and classroom, and that it is only through these day-to-day immediate determinants that the pressure and influence of the society and the state make an impact. Doyle (1977) also has developed this idea. The demands of specific classrooms establish limits on teacher behaviour. Only a selective range of behaviours are appropriate to the classroom environment and the successful teacher must learn strategies appropriate to particular settings. The children in the classroom have a socialising impact on the teacher, particularly because of the isolation of teachers within their classroom away from colleagues and supervisors (Haller, 1967, and Doyle, 1979). Doyle suggests that the influence of students ranges from the general teaching approach and patterns of language that teachers use to the frequency of specific teaching methods used.

These studies of classrooms indicate general influences, but say little about how specific characteristics of teachers and pupils affect teacher development. What is known is that experience in the classroom develops teachers' belief about learning in important ways. These in turn will influence practices (Black and Wiliam, *Inside the Black Box*. 1998a: 13). In relation to assessment, as well as other changes in practice, Black and Wiliam remark that there "is a close link of formative assessment practice both with other components of a teacher's own pedagogy, and with a teacher's conception of his or her role." (Black and Wiliam, 1998b: 20) For example, in a study that was directed in enhancing science teachers' skills in observation, the teachers were unwilling to change classroom practices to give students more responsibility and allow themselves the time to complete observation sessions (Cavendish et al, 1990). Other schemes have attempted to change practice, and it was found that teachers were reluctant to give up practices which deviated from their whole pattern of pedagogy (Torie, 1989, and Shepard et al., 1996). In relation of assessment practice, Bachor and Anderson (1994) suggest that teachers may lack the overall conceptual picture or framework which might connect diverse pieces of assessment information together and enable them to use them for improving instruction. Indeed, Radnor (1994) found that teachers, despite training in making qualitative judgments of student work, persevered in the use of their own criteria for achievement and missed clues which might have altered their agenda. These studies suggest that teacher held-beliefs developed through experience influence the degree to which any innovation or change in practice might be assimilated.

The research on teachers' work may also shed some light on how practice is developed. Each teacher is part of the micro-politics of the school (Ball, 1987), but because of the nature of teaching as a profession, the work itself most often takes place in isolation. Goodlad's conclusions from large-scale sampling indicate that teachers often have little or no involvement in school-wide matters,

and that the teacher has virtual autonomy in making classroom decisions about such matters as materials, class organisation, and instructional procedures. This autonomy, however, “seemed to be exercised in a context more of isolation than of rich professional dialogue.” (Goodlad, 1984:186)) The combination of isolation, complete control and lack of collegiality places teachers in a situation where they are expected to know and do everything well, with poor professional support or input. Lortie (1975) confirms this feeling of “uncertainty” as a dominant psychological state. The teacher may well be unsure of his or her impact, but must guard the impression of effectiveness to maintain self-esteem and control. In Lortie’s study, 91 per cent of the 6,000 Dade County teachers questioned said they would use a 10-hour gift of time for classroom-related activities. Once again, the first choice was an individualistic task, rather than a collegial one. Given this research, the impact of experience in the classroom is important to developing practice. The influence of colleagues may only be relevant if the school has found ways of creating collegial relationships.

II. The Influence of Colleagues

Teachers’ isolation from each other, as discussed in the previous section, may contribute to a lack of collegial exchange. In relation to assessment, teachers appear to be somewhat unaware of the assessment work of colleagues. (Cizek et al. 1995 and Hall et al. 1997) Furthermore, they often do not trust or use the assessment information developed by colleagues suggests that “teacher isolation and its opposite-collegiality provide the best starting point for understanding what enables teachers to change and develop their professional practices”. (Fullan, 1991:131) He stresses that positive collaboration is “where the power for change lies.” Rosenholtz provides a model of “Learning-Enriched Schools” which include vision-building and shared goals between head teachers and staff. Teacher training and teacher collaboration served to focus efforts and mobilise resources. In learning-enriched schools, as opposed to learning-impooverished schools, “it is assumed that improvement in teaching is a collective

rather than individual enterprise, and that analysis, experimentation and evaluation in concert with colleagues are conditions under which teachers improve." (Rosenholtz, 1989:73)

III. The Role of the Head Teacher

Fullan stresses that "The most powerful potential source of help or hindrance to the teacher is the head teacher" (Fullan, 1991:143). Smith and Andrews found that effective head teachers were most often engaged with their teachers in four kinds of strategic interactions, including those of a resource provider, instructional resource, communicator and as a visible presence. These roles all seem to relate to breaking down the walls of isolation between teachers, and establishing communication and collegial support. They found, in their study of 1,200 principals, that schools where the principals were perceived by the staff as "strong instructional leaders exhibited significantly greater gain scores in achievement in reading and mathematics than did schools operated by average and weak instructional leaders". (Smith and Andrews, 1989:9)

Fullan also makes it clear that successful head teachers do not promote change over stability. Quite the opposite, they help to protect the teachers and the students from change that is considered ill-conceived or unwanted (Fullan, 1991:152). If this is so, then the head teacher's understanding of formative and summative purposes in assessment, for example, could be influential in teachers' understanding as well. The leadership style of the head teacher can be important to the effectiveness of change within a school. In their Principal-Teacher Interaction Study (PTI) Hall and Hord identified three types of principals: the responder, the manager and the initiator (Hall and Hord, 1987). Of the three types, the initiator was the most effective in implementing and maintaining innovations. They spent more time with staff, clarifying, and supporting the change with 40% of their interventions in this category of interactions, as compared to 20% for managers and responders.

The three-year study by Mortimore et al. (1988) related head teacher effectiveness to overall school effectiveness. "Purposeful leadership occurred where the head teacher understood the needs of the school and was involved actively in the school's work, without exerting total control over the rest of the staff. In effective schools, head teachers were involved in curriculum discussions, and influenced the content of guidelines.. without taking complete control. They also influenced the teaching strategies of teachers, but only selectively, where they judged it necessary. This leadership was demonstrated by an emphasis on the monitoring of pupils' progress, through teachers keeping individual records. Approaches varied--some schools kept written records; others passed on folders of pupils' work to their next teacher; some did both--but a systematic policy of record keeping was important." (Mortimore et al. 1988:250-51) This research suggests that one way a head teacher's effectiveness can be demonstrated is through the systems he or she creates, in concert with the teachers in the school, for assessment and monitoring pupil progress. Effective head teachers were also involved at times in the development of teachers' strategies. In relation to assessment practices in the case study schools, the influence of the head teacher is therefore important to analyse and describe. For this reason, head teachers were interviewed and completed questionnaires about their role in implementing the NC and developing teacher assessment in their schools. Teachers were also interviewed to ascertain their perceptions of the head teacher's role in developing assessment systems in the school.

Conclusion to Chapter One

The micro-level influences I have described in this chapter which might in some way influence teachers' use of formative assessment strategies and their professional knowledge of its practice, are drawn from the world inside the school gates where most of the teachers' daily interactions occur. The only exception is in-service training which can occur both inside and beyond the school. The purpose of researching these factors was to help explain and describe

the case study teachers' formative skills, and to suggest how their professional knowledge of formative assessment might have developed.

This chapter has also given an account of the educational intentions of the National Curriculum which, in conjunction with the assessment imperatives directed by TGAT, established a pivotal contextual setting for this case study research. More specifically, a key element of the curriculum around which the assessment system was structured was the Statements of Attainment. According to the curriculum designers interviewed and educationalists advocating a criterion-referenced assessment system for the National Curriculum, Statements of Attainment were written to provide teachers with criteria for evaluating student work objectively rather than normatively. It was hoped that the National Curriculum Statements might enable teachers to recognize a pupil's conceptual understanding within a discipline and then use that knowledge to scaffold the pupil's future learning. Statements were also conceived to help in the process of articulating aspects of achievement to pupils through feedback, to instill a notion of progression within a subject or discipline and to assist in calibrating teachers' judgements against common standards. As will be discussed in Chapter Two, more than one of these skills is associated with formative assessment in a form integrated into practice in a deep rather than shallow way. Therefore in investigating influences on formative assessment at the classroom level, I have directed research questions to the teacher's use of Statements of Attainment. The research questions are given at the end of the next chapter in the literature review of the theory and practice of formative assessment.

Context of Research

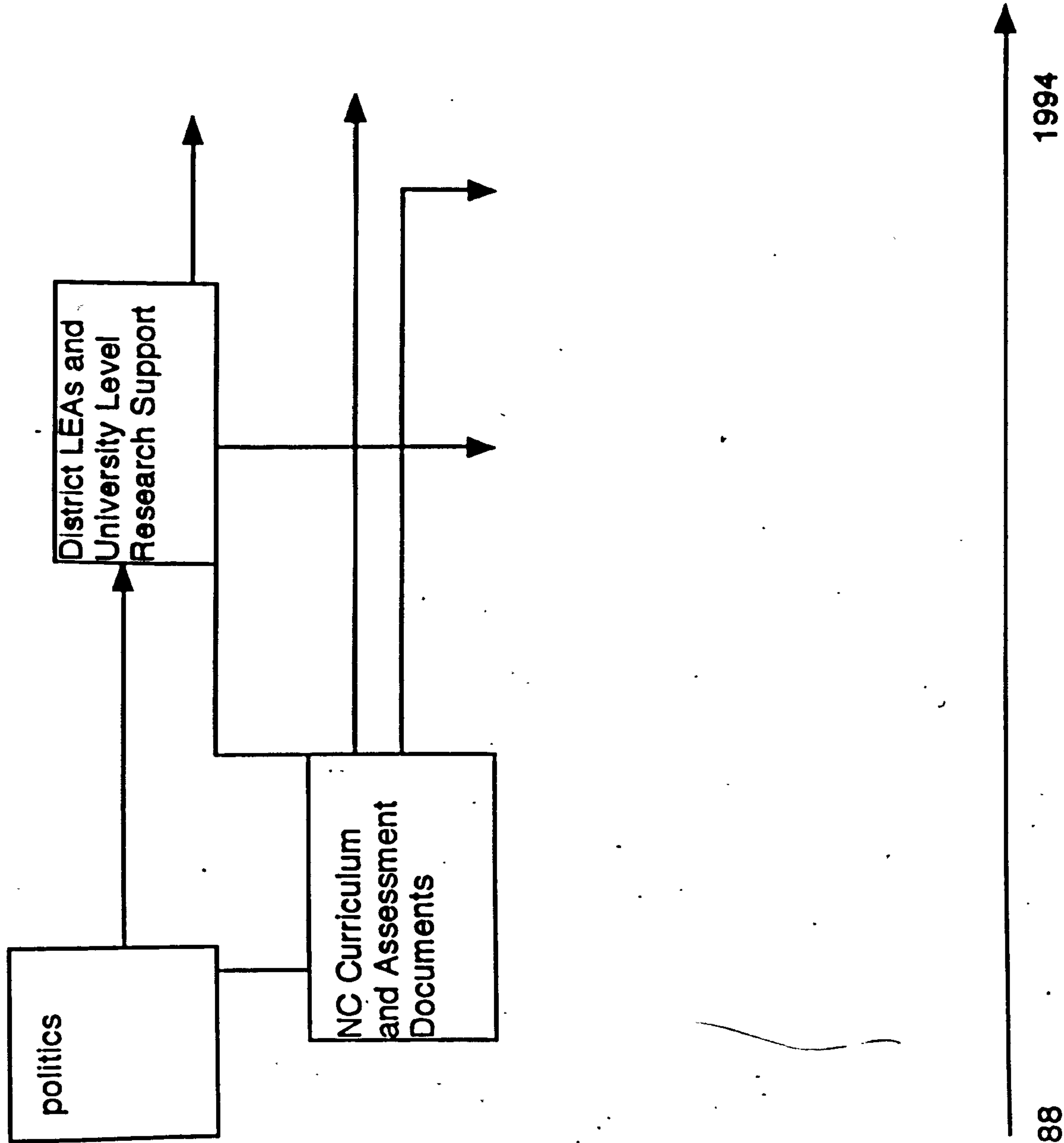


Figure 1.1. Model of Context and Influencing Factors on Classroom Assessment Practices
The arrows indicate potential sources of influence on assessment as they developed over the period 1988-94.

Model of Interactions

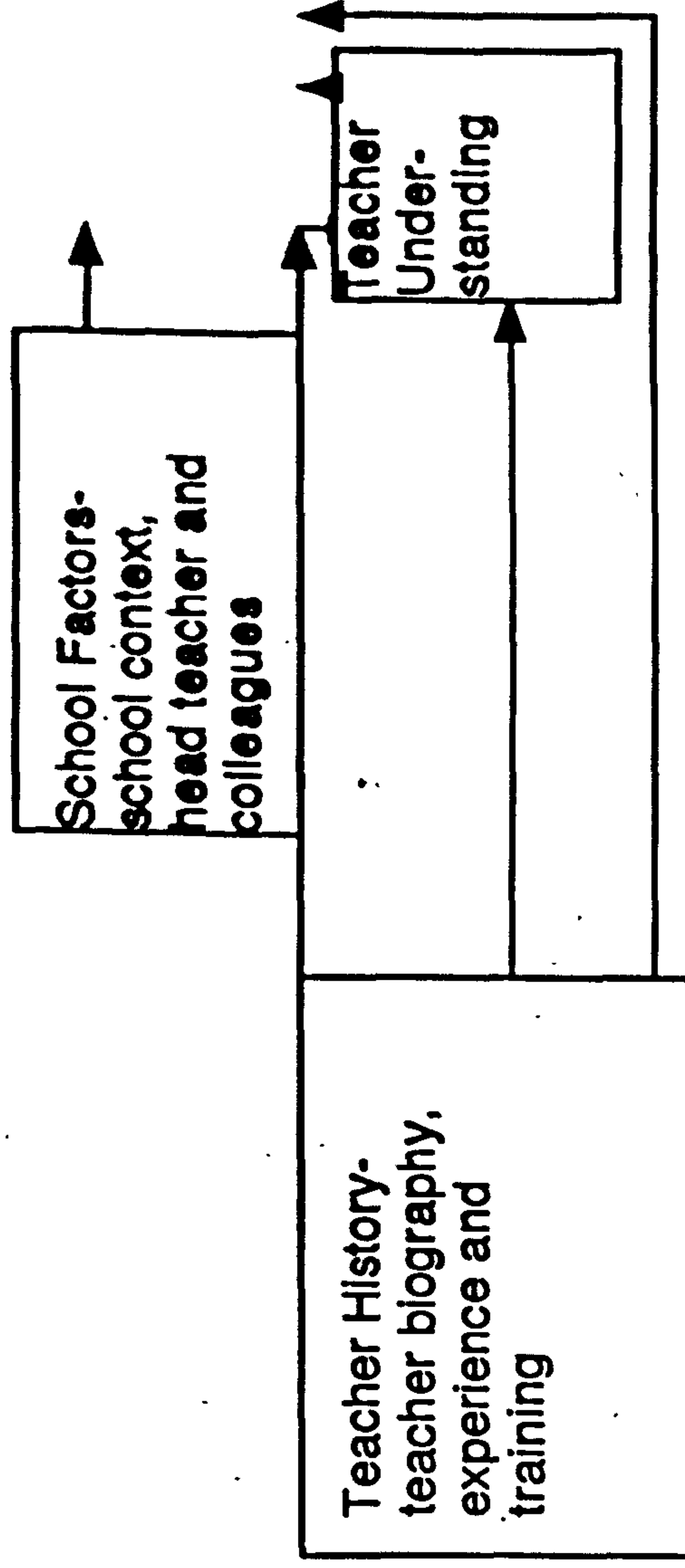


Figure 1.2- Influences on Classroom Assessment at the school and personal level

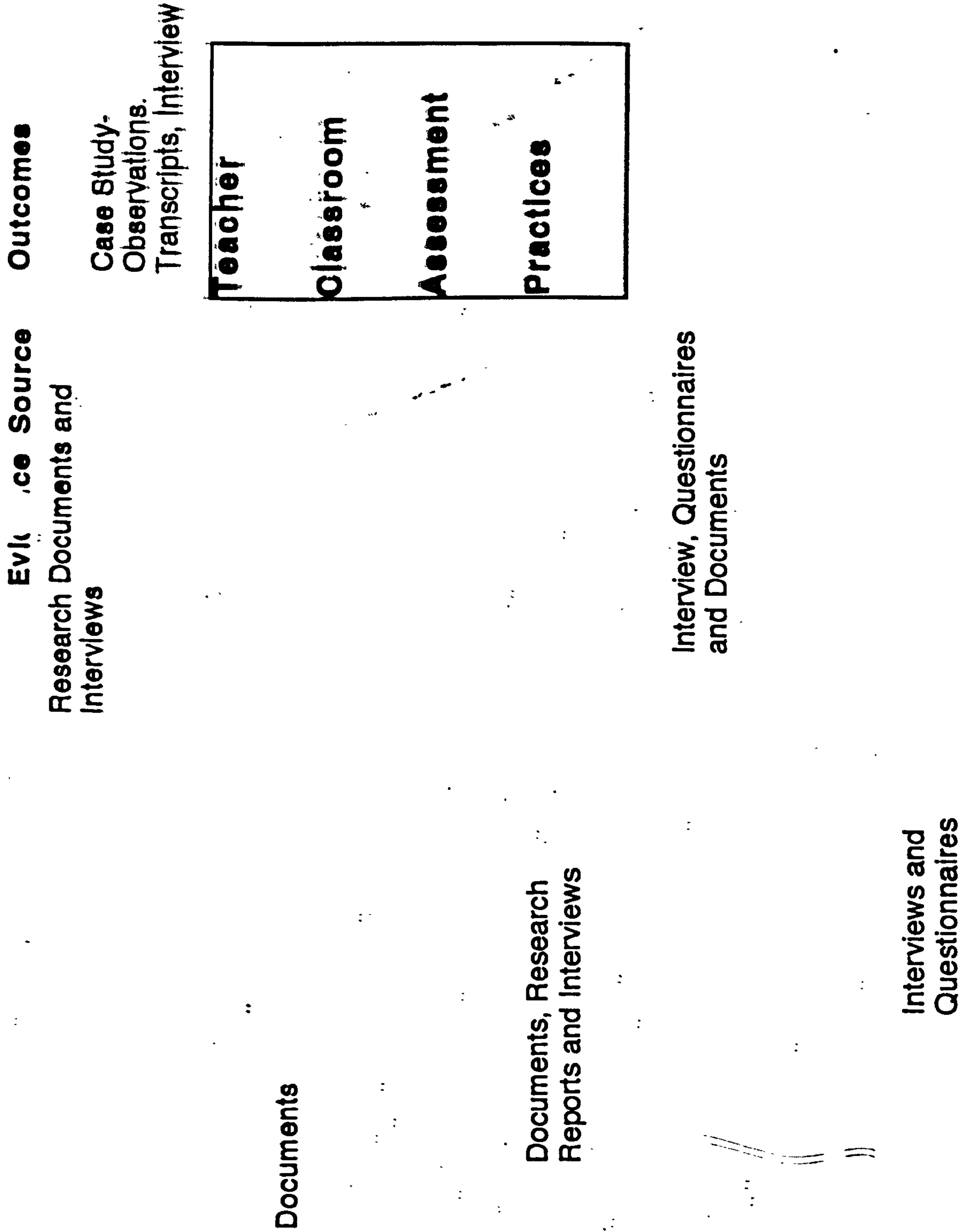


Figure 1.3 The Outcome of All Sources of Influence as improved classroom assessment

Chapter Two

Part One: Toward an Understanding of Formative Assessment Background and Review of Literature

Assessment in the British Educational Context

In the search for methods to improve education standards, attention to learning theory and the role of teacher assessment within learning represented a change of emphasis away from standardised testing. Gathering data on academic outcomes, through external testing and examination, had dominated the assessment environment until the late 1980s. In Britain, pursuit of a clear theoretical underpinning for teacher assessment had only begun to be investigated when the Task Group on Assessment and Testing (TGAT) made their report in 1988, outlining the future of assessment in Britain. In that report, teacher assessment is purported to be a central function of teaching. "Promoting children's learning is a principal aim of schools; assessment lies at the heart of this process. It can provide a framework in which educational objectives may be set, and pupils' progress charted and expressed. It can yield a basis for planning the next educational steps in response to children's needs." (TGAT, 1988: para. 3)

Two central functions of teacher assessment can be understood within this statement. Setting and evaluating curriculum objectives relates to the summative and evaluative forms of assessment, while planning and teaching in response to student needs relates to formative assessment.

Formative Assessment: Some initial definitions

In the British context of the 1990's, some of the definitions given by government documents are in themselves, examples of the confusion around Teacher Assessment. "Assessment made by teachers of pupil's attainment, knowledge and understanding is called variously teacher assessment... school-based assessment and formative assessment. The last of these terms is not always appropriate since 'formative' refers to a function rather than the person who makes the assessment." (Gipps, 1995:123). Teacher Assessment data used

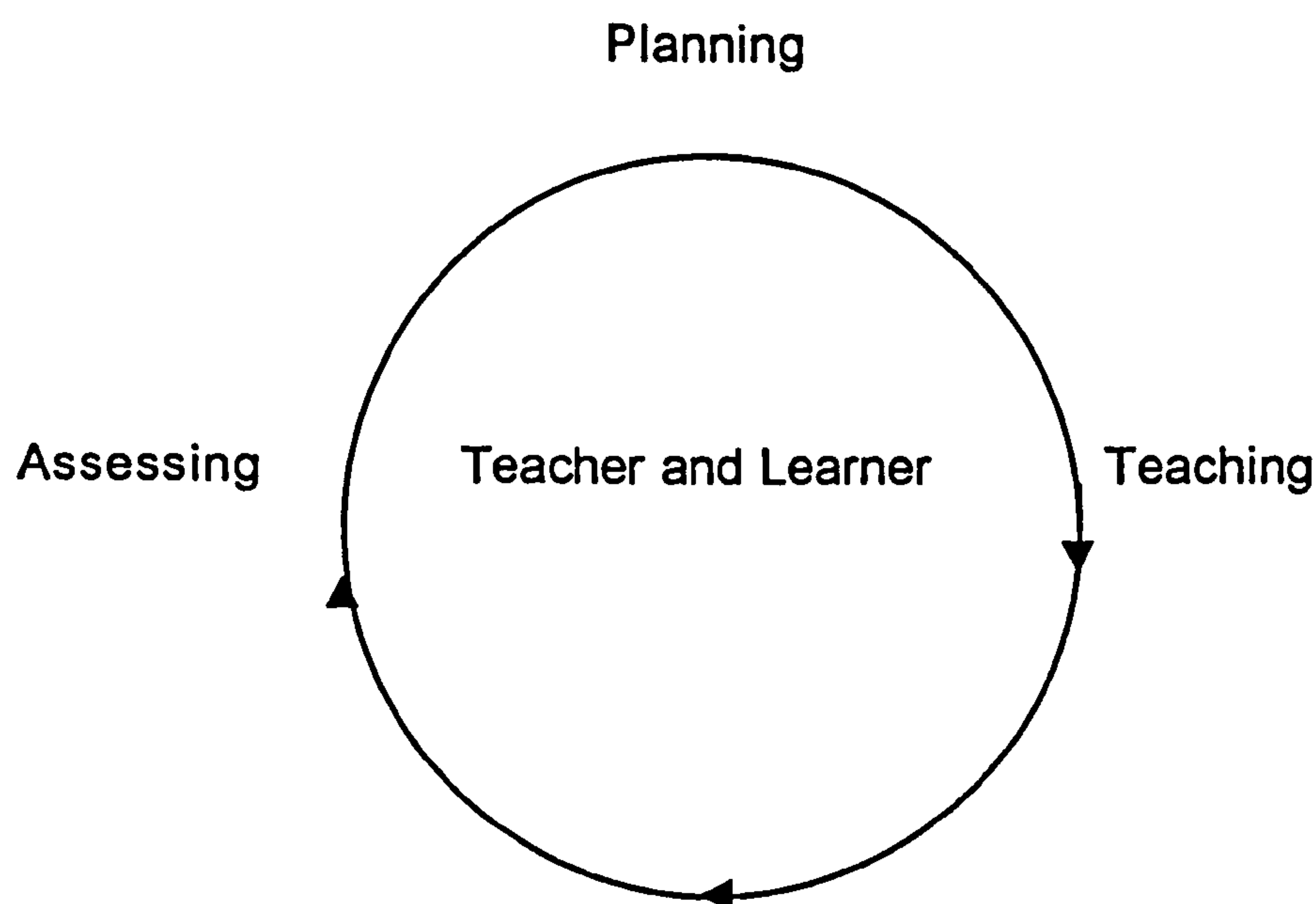
for reporting on achievement for the National Curriculum, was to be compiled throughout the key stage so that at the end of the key stage the teacher is summarising all the evidence collected. While this data may be used for formative purposes, the summative function is emphasised. Although various curriculum and assessment documents refer to teacher assessment or formative assessment, what is meant by the terms can be easily misunderstood.

The terms formative assessment, instructional assessment, teacher assessment, instructional assessment and authentic assessment, have often been used interchangeably in the literature, resulting in confusion for teachers and researchers. Wiliam and Black (1998:53) indicate that the term "formative assessment" is "not common in the assessment literature." For the term formative assessment, they have found that "classroom evaluation", "curriculum-based assessment", "feedback" and "formative evaluation" are used interchangeably for the term as well. Nevertheless the increased interest in formative assessment is evidence that a "paradigm shift" has occurred from a testing culture based on measurement and psychometrics, to an assessment culture based on assessment for learning (Gipps, 1994:158, Shinn and Hubbard, 1992). A starting point might be made here in the definition of formative assessment. It is understood to be the accomplishment of the sequence of two actions. First, the learner must recognize the gap between the desired goal and their present state of achievement, skill or understanding. Second, the learner must take some action to close that gap to attain the goal (Ramaprasad, 1983, Sadler, 1989). A wide range of activities is implied by this definition.

This chapter examines the research on formative assessment theory and strategies. It will be shown that the research suggests formative assessment is embedded in planning, teaching and assessing in some deeply integrated way. The diagram by Mitchell and Koshy (1993) (see Fig. 2.1) outlines a framework for thinking about formative assessment as a repeating cycle of teacher thinking and activity. For the purpose of this study, the teaching/learning/assessing cycle

has been used to structure the review of the literature. What is known about the theory and the use of strategies at each phase of the cycle is discussed. At the end of the chapter a summary of the strategies is provided. The information from the literature will be applied to the case studies in Chapters Four to Six, in an attempt to describe assessment strategies as they are integrated into daily practice. Through an inductive investigation of teachers' practice, the case study analyses are used to develop and refine a model, revealing the integration of formative assessment strategies into the three phases of teaching.

Figure 2.1 Planning/Teaching/ Assessing Cycle (Mitchell and Koshy:1993)



Formative Assessment: An Integrated Practice

Stiggins and Conklin (1992:179) refer to the instructor as a “teacher/ assessor” to make obvious their point that assessing is not an add-on activity. They note that teachers assess to make at least twelve kinds of decisions about students including individual and class strengths and weaknesses, assigning grades and evaluating their instruction. Teaching itself includes communication of objectives or achievement expectations, communication of social expectations, controlling student motivation and behaviour, enhancing student achievement including test-taking skills, and using

assessment as a teaching strategy in and of itself. Airasian (1991) divides the functions of assessment into three categories of purposes, which also illustrate the variation between assessment for learning and assessment for other purposes. The first category he terms "Official Assessments" used for the purpose of grading, grouping, and measuring achievement. Interpreting standard scores, meeting with parents about term reports, identifying students for special needs placement, and making promotion recommendations are "part of the official responsibility a teacher assumes as an employee of a school system." Again, this form of assessment is often termed "summative" assessment. A second category, "Sizing up", represents information which contributes to a personality sketch of each student to enhance instruction and communication between teachers and students. Information about a student's background, previous grades, interests and talents, motivation and attitudes contribute to this assessment and are used by the teacher to individualise teaching. The third purpose is "Instructional Assessment". In Airasian's three-part model of interactive learning, assessment is one of these key elements. Instructional assessments are used for planning and instruction. Instructional assessment can be seen in this definition to be most closely related to the term "formative" assessment which is the focus of this study. Deciding what is to be taught, and how, is dependent on the assessment of the student's individual progress during or after a lesson. This understanding of the effectiveness of each lesson feeds back into ideas for the next step. The Airasian model of interactive learning closely integrates with teaching and planning.

For the purpose of compiling their extensive literature review on formative assessment, Black and Wiliam define formative assessment as "encompassing all those activities undertaken by teachers, and/or by students, which provide information to be used as feedback to modify the teaching and learning activities in which they are engaged." (Black and Wiliam, 1998: 7-8). An important word choice in this definition is "activities", suggesting that teacher

and student skills and actions are key to this process. The inclusion of feedback information used to modify teaching and the development of learning activities, widens the perspective to include teaching and planning as well as assessment strategies. Thus formative assessment is integrated with teaching practice in an indissoluble way and can occur through wide range of teaching strategies.

Other researchers also have suggested that instructional assessment may include a wide range of integrated teacher activities. Nitko (1996) (see Fig. 2.2) labels the range of activities involved in teaching as “managing instruction”. Included here are teacher activities such as planning, monitoring instructional activities, placing students into learning sequences, monitoring student progress, diagnosing learning difficulties, feedback and finally, assigning grades. Some of these activities are directed towards summative assessment, but many others relate to instructional or formative assessment. Here, as in Airaisian, assessment and teaching are closely linked or indeed inseparable, or as Graue (1993:285) concludes, “Optimally, instructional assessment can become the glue that holds pieces of the learning process together.”

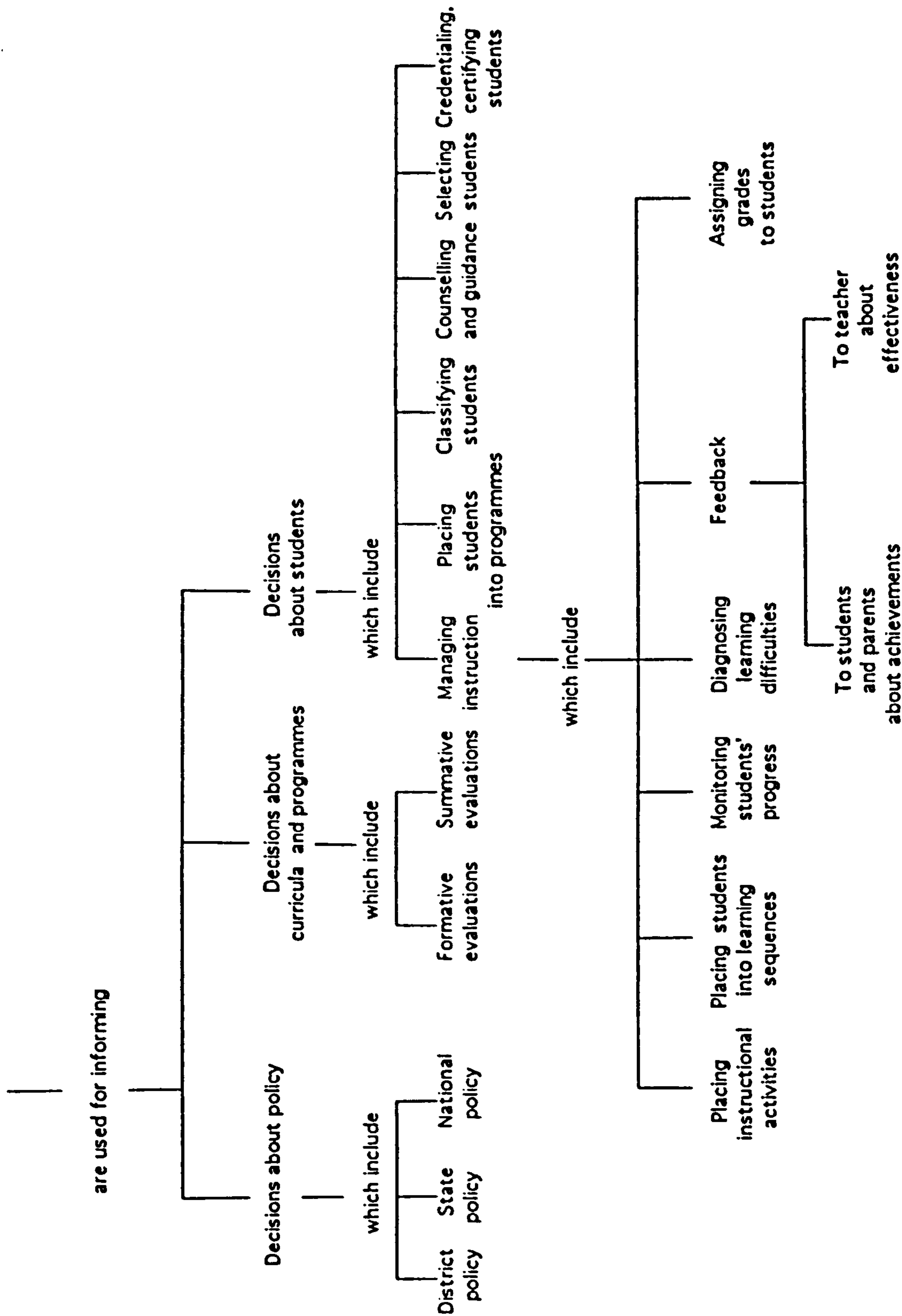


Figure 2.2. Nitko, from Curriculum-Based Continuous Assessment: A Framework for Concepts, Procedures and Policies, in *Assessment in Education* 3, No. 2: 321-327

Formative Assessment: An Interdisciplinary Perspective

The teacher has a fundamental role in teaching and assessing to promote learning. One of the more difficult aspects of reviewing the literature on formative assessment is that research interest and comment comes from a wide range of academic perspectives including measurement theory, cognitive science, instructional and social theory. These varying perspectives at times seem at odds with each other, as well as with the pragmatic perspective of the teacher practitioner. And yet, as Graue (1993), points out, the topic bridges the interests of theorists and practitioners. Any model or framework for the understanding and practice of formative assessment must develop from both a theoretical and practical framework. In particular, the tension between the purposes and definitions of formative and summative assessment is often presented in the literature. Again, Graue (1993:287-8) suggests this conflict is related to the differences in the conceptual framework understood by scholars and educational practitioners. She suggests that "the topic of assessment is a wonderful example of the gap between theoretical and practitioner discourse and the communities that generate them." In her view, while the research and measurement community might be interested in models of assessment that provide mathematically reliable evidence to be used for predictions and accountability, practitioners dismiss complex methods that are irrelevant to their practice. Instead they work to develop ways of tracking and judging student learning. According to Graue (1993:288), instructional assessment needs a framework which utilizes more than a single theoretical or practical perspective. Her contention is that a framework for instructional assessment should include the input from "a combination of theoretical perspectives as well as accumulated practitioner knowledge and values." Therefore this review of literature must account for the fact that many of the studies included in the Black and Wiliam review relate to the outcomes or measured impact of formative assessment

strategies, whereas others including Graue, investigate the function of formative assessment in the learning process. In this review of literature then, more than one perspective on the literature must be included to produce an integrated approach.

Part Two: Formative Assessment: From Theory Into Practice

In the last decade, new forms of assessment for both summative and formative purposes have represented a burgeoning new field of research and academic interest. However, processes and practices involved in formative assessment have proven difficult to pin down. Formative assessment is, first of all, difficult to observe (Torrance, 1993). The recent review by Black and Wiliam surveys the research on formative assessment theory. It also examines the claims of the effectiveness of formative assessment. Their analysis of research on the efficacy of formative assessment included results from a wide range of “real life” learning situations in schools, as well as from highly-controlled research contexts and structured programmes. In addition, the review suggests elements of teacher practice essential to formative assessment. As a result of their review they identify three conclusions about formative assessment:

- that formative assessment is not well understood by teachers and is weak in practice.
- that the context of national or local requirements for certification and accountability will exert a powerful influence on its practice.
- that its implementation calls for rather deep changes both in teachers’ perceptions of their own role in relation to their students and in their classroom practices.

(Black and Wiliam, 1998:20)

The Black and Wiliam review researches key topics developed from an analysis of two earlier reviews by Natriello (1987) and later, Crooks (1988). Natriello surveyed a wide range of assessment topics including direction and

motivation; two terms related to formative assessment. Natriello analysed the issues “within a framework of the assessment cycle, which starts from purposes, then moves to the setting of tasks, criteria and standards, then through appraising performance and providing feedback and outcomes.” (Black and Wiliam 1998:8) Here again, formative assessment includes teacher activities relating to planning from purposes and criteria, as well as teacher discourse relating to teaching through feedback. Crooks looked at both formative and summative assessment and their impact on student learning. He suggested that the summative function had been dominant for too long and more emphasis should be directed to assessment that assists learning. The importance of feedback in learning was highlighted as well.

The subsequent literature review material will therefore be discussed under three sub-headings initiated by Natriello’s assessment cycle, which also parallel the three phases of teaching:

1. Planning - setting learning goals
2. Teaching - setting of tasks through instruction and teaching
3. Assessing -appraising and feedback

I. The Planning Phase: Research and Theory Relating to Setting Learning Goals

Research into planning reveals it to be a complex and non-linear interactive problem-solving process (McCutcheon 1980; Sardo-Brown 1990). Teachers may start with an idea, a curriculum guide or text. They also select tasks by attending to individual and group difficulties in the classroom, the resources available including time, their own range of teaching strategies, the students’ learning strategies and to the accepted ways of doing things in the school. One form of planning reflects attention to objective goals in relation to progression within a subject area, integrated topic or whole school plan. Planning with the use of objectives is seen as essential to formative assessment by Qualter (1988). Stiggins and Conklin (1992) also suggest that assessment skills must be a

significant part of a teacher's professional assessment training because they are used to direct and guide teacher planning. This may be because criteria are useful for either summative kinds of assessment or for continuous formative assessment purposes. Teachers cope with broad-range planning and specific day-to-day planning in various ways. "Some teachers showed a comprehensive awareness of the balance of different lessons and their place in the curriculum as a whole, as well as a very clear concern with progression, continuity, the acquisition of underlying skills, and the achievement of goals." (Alexander, 1994) Others adopt a more incremental approach, planning as they went along (Clark and Yinger, 1987). A second form of planning occurs, which comprises the flexible responses to a teacher's spontaneous evaluation of the effectiveness of a lesson or activity. A teacher uses this feedback from students to plan subsequent lessons; it may lead to re-teaching, allowing more time, more practice, remediation or enrichment activities. Planning is part of the assessment process because it incorporates goals set by curriculum on the one hand and attention to individual and class progress and individual learning styles on the other. It would seem then that some kinds of criteria need to be set out clearly before teaching while others develop during the evaluative discussion between collaborating expert and novice (Sadler, 1989:72).

Ramprasad's (1983) premise that the learner must recognize the gap between the desired goal and their present state of achievement, skill or understanding, also suggests that formative assessment must include attention to goals, criteria or learning outcomes. The concept of achievement must be understood by both the teacher and the student so that their discussion can move to an exploration of how the student might continue work to bridge the gap. Criteria may be developed from several sources. One source may be the use of a criterion-referenced scale. A scale lists detailed criteria for assessing achievement. Bergan et al, (1991) conducted a study where 838 socially and economically disadvantaged five-year-old children from six US locations were

involved in a programme directed to the acquisition of basic skills. A criterion-referenced rating system was used to help teachers locate students on a scale, based on their diagnostic assessments. The teachers were trained to implement a programme that included an initial assessment of individuals, on-going assessment using observation skills, open-style activities designed to match individual needs, consultation with others after two weeks and more diagnostic review assessments. Outcome tests were compared with pre-tests on the same skills. While the pre-tests were a strong predictor of outcomes, the experimental group achieved significantly higher scores than the control group. These results were clear, even though the pre and post-tests were multiple-choice tests unlike the activities the children had used in class. Black and Wiliam (1998) point out that of primary interest in this research was the linking of performance to a criterion-based scheme of diagnostic assessment. The teacher evaluated performance against the scale, in collaboration with others in an on-going way. It should be noted when reviewing this study that the teaching was responsive to the constantly up-dated information teachers gathered about student learning. The use of observation, open-ended activities and on-going collaboration were also used. Such teaching strategies will be discussed more fully in the section on teaching. However, the use of a detailed criterion-referenced curriculum or scale of achievement was effective.

Criterion-referenced models are not new in the literature. Their roots are in the traditions of mastery learning models. Bloom's (1971) Mastery for Learning (LMF) or Keller's Personalized System of Instruction (PSI) also include a number of these same instructional elements (referred to in McNeil) . According to McNeil (1969) any increase in learning gains can be attributed to several key elements:

1. The learner must understand the nature of the task to be learned and the procedure to be followed in learning it.

2. Specific instructional objectives relating to the learning task must be formulated.
3. Instruction must be broken down into small units at the end of which tests are used to provide a source of assessment information to the teacher and the learner.
4. The teacher must provide detailed feedback about the learner's particular errors and how to correct them.
5. Increased time and alternative materials or learning opportunities may be needed.
6. Peer review and conferencing may be used to discuss tests and help each other overcome the problems identified by the test.

Stiggins and Conklin (1992) similarly contend that an assessment skill needed by teachers is the ability to articulate learning targets. Such targets have several forms: subject knowledge, thinking skills, specific behaviours, or performance skills. In this list, some goals may be derived from external sources such as curriculum, subject-base objectives, while other develop from teacher's knowledge and during the process of teaching. The possible connection between assessment and curriculum design becomes apparent at this point. In order for a teacher to articulate the goals of achievement as part of instruction, he or she must know what is to be achieved and, in general, the order of progression. But Sadler (1989) also argues that much teacher knowledge is "guild knowledge"; that is, what the teacher has learned through experience with teaching and with students. Such knowledge held by the teacher as a kind of expert may not be related to any extrinsic or objective source, nor readily articulated to the learner. Tittle (1994) would agree that the complexity in setting learning goals and criteria is increased to the formulation of goals in that they are influenced by the teacher's beliefs about learning, about the subject matter, about learning and about the particular students. She suggests that these beliefs provide the basis for a teacher's evaluation of student work and direct the teacher's thinking about the

“gap” between student performance and achievement. Sadler (1983) comments that it is necessary for a teacher to select criteria of various kinds to make judgements on a single piece of work. He articulates four types of criteria from which a teacher/ assessor can draw for planning or making evaluative judgements. Regulative criteria refers to the rules governing correct form and procedures in a subject discipline such as spelling or style directed by published manuals and so on. Because the rules are clearly drawn, evaluating achievement in this area is straightforward. Logical criteria involves adherence to valid chains of thinking and reasoning whereby conclusions are replicable and problems are “solved”. Prescriptive criteria are less easily determined than the first two. Such criteria implies value that can only be described through experience with a particular case. Concepts such as “originality”, or “coherence” rely on recognition of these qualities in specific examples of work. The fourth type of criteria described by Sadler is the “constitutive” criteria, that is, the elements of process and concepts characterised by a specific subject or discipline. He cites the example of history, which has its own method of establishing meanings taken from evidence, through use of objectivity, verification, and interpretation.

Clearly a problem with such range of criteria is that the knowledge of the criteria is not always available to the learner. This “metacriteria” may be selected by the teacher in a way not explicit to the learner. A detailed curriculum, such as the National Curriculum, could provide the basis of a clearer articulation of goals. Whether or not a curriculum can influence the teacher’s understanding and communication of goals is a question to be pursued in the case studies of this research.

Torrance (1993) describes two approaches to formative assessment in relation to learning goals. One, based on a behaviourist model, is effected by making short-term measurable goals very clear, teaching directly to those goals and then assessing the outcome. Mastery learning and some graded assessment work schemes are built upon this model. Torrance suggests that the National

Curriculum and TGAT take this approach to formative assessment. The second approach defines formative assessment from a constructivist learning perspective. In constructivist learning, teacher-student discourse is an essential pedagogical tool. Through talk, the teacher gathers what the learner knows and understands and develops an idea of what kind of instruction should follow as the next, best step. This kind of criteria might be termed “emergent” criteria, because it develops through the processes of working and discussing the work with the learner. The learner is involved and central to the setting of goals in this process.

Planning and its Relation to Learning Theory

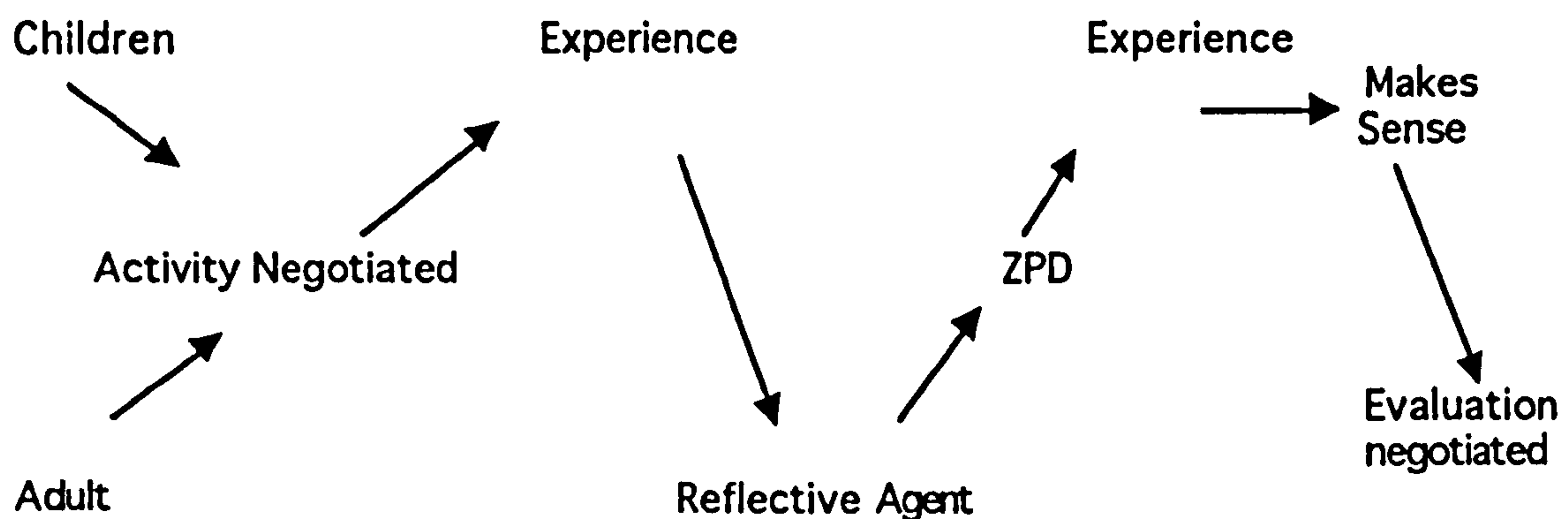
At the heart of the behaviourist and the constructivist approach lies the difference of belief in the nature of the criteria for learning and hence the nature of knowledge. On the one hand, curriculum experts argue that the structure and content of a particular subject or discipline should be used as the framework for creating criteria and making judgements about learning. Without a thorough, comprehensive understanding of a subject, teachers cannot make complex instructional decisions about teaching and assessing effectively. Further to this researchers (Black, 1993, Brown & Denvir, 1987) suggest that teachers need a sound understanding of progression through a subject, in order to know what the next step for a specific student might be. For many teachers, the curriculum is the only source of subject-based progression. This is termed a curriculum-based perspective on learning, where instructional assessment is based on an understanding of the subject. (Cobb, Wood, and Yackel, 1990, Fennema et al., 1993; Prawat, 1993). Assessment of this kind should be “content-rich’ and based on an series of content accomplishments. (Baron, 1991:308).

A discipline-based perspective (Graue, 1993:303) contrasts sharply with the concept of learning advocated by constructivist view, where learning is seen as a process of constructing meaning within a social context. As outlined in



the curriculum section of Chapter One, social constructivist learning views learners as “social beings who construct their understandings from social interaction within specific socio-cultural settings,” (Pollard, 1994:13) Built upon the work of Piaget (1959), Vygotsky (1959, 1978), and Bruner, (1986) this theory suggests that young children are capable of sophisticated forms of communicating meaning, that the work of teachers is to scaffold and support the learners, and that learners must have a significant degree of control over the process of learning if they are to remain motivated. The progress of students is supported by a “reflective agent” who provides “meaningful and appropriate guidance and extension to the cognitive structuring and skill development arising from the child’s initial experiences.” (Pollard in Pollard and Bourne, 1994:22) This support enables the student to work through the zone of proximal development or the ZPD, where thinking is restructured because of the learning experience. (See Figure 2.3.) Pollard maintains that to be a teacher who is a reflective agent requires a very sensitive and accurate understanding of each child’s needs. It thus places a premium on formative teacher assessment”. (Pollard, in Pollard and Bourne, 1994:22)

Figure 2.3 A Social-Constructivist model of the teaching/ learning process
 (Adapted from Pollard, in *Teaching and Learning in the Primary School*, 1994)



Royce Sadler (1989) has contributed much to the understanding of formative assessment and learning. He suggests that “Intelligent academic learning occurs when a person knows what is to be achieved, works towards ways of doing it, and can tell when progress is being made.” There are three components: the directional (attending to goals), the algorithmic (devising strategies and making moves) and the evaluative (monitoring the discrepancy between current status and the desired end). Formative assessment assists students in understanding all three components through the articulation of clear goals, and specific feedback indicating the differences between the goal and student productions. Of the three components articulated by Sadler, two may be influenced by the curriculum targets or objectives; hence, the rationale in this study for the focus on curriculum Statements of Attainments or “discipline-knowledge” as a possible influence on formative assessment practice. The directional component or goals could be established by the objectives in the curriculum. The third component, the evaluative component *could* be effected by using curriculum targets to monitor the difference between a child’s work and the desired level of achievement. But as we have seen, learning goals can also refer to the “emergent” goals which arise from an individual lesson, assignment or task. These goals emerge when the teacher and student engage in discourse which is “thoughtful, reflective, focussed to evoke and explore understanding, and conducted so that all pupils have an opportunity to think and to express

their ideas.” (Black and Wiliam, Inside the Black Box, 1998:12) These learning goals arising from dialogue between student and teacher are more directed by the social-constructivist theory of learning.

However, even if one accepts a social-constructivist theory of learning, the development of socially-constructed knowledge and the communication of learning goals is in no way simple. According to Filer (1995), what is valued and viewed as legitimate or correct is shaped by the culture of the learning situation and is influenced by the particular context. The strength of the “frame” (Bernstein, 1971) constructed by the teacher in his or her relationship with students influences perceptions of power within the classroom context. What is valued in learning and knowledge may not be easily understood, communicated or shared in the classroom.

Torrance and Pryor (1998) categorise two distinct approaches to formative assessment arising from teachers’ differing views of learning, either behavioural relating to externally devised objectives such as curriculum or socially-constructed learning derived from negotiated meanings and intentions. Each form of formative assessment is in some way characterised by differing notions of learning goals. Convergent Assessment implies finding out if the child knows, or can do a particular skill. Planning to precise plans and particular objectives and curriculum goals may direct both the methods used to assess and the forms of discourse between the student and the teacher. Tick-sheets, tests and “can-do” lists are relevant. Talk between students and the teacher falls mainly into the Initiation (by the teacher), Response (by student) and Follow up (by teacher) or the IRF form (Coulthard and Sinclair, 1975). The teacher’s feedback may most often be characterised by correction or evaluation of the learner’s responses. Divergent assessment, by contrast, shifts the emphasis from the agenda and goals controlled by the teacher to a more student-focused perspective directed by learning.

Table 2.1 Torrance and Pryor (1998) Convergent and Divergent Assessment

Convergent Assessment

Assessment which aims to discover if the learner knows, understands or can do a predetermined thing. This is characterised by :

Practical Implications

- a. precise planning and an intention to stick to it;
- b. tick lists and can do statements;
- c. an analysis of the interaction of the learner and the curriculum from the point of view of the curriculum
- d. closed or pseudo-open questioning and tasks;
- e. a focus on contrasting errors with correct responses;
- f. judgemental or quantitative evaluation;
- g. involvement of the pupil as recipient of assessments.

Theoretical Implications

- h. a behaviourist view of education
- i. an intention to teach or assess the next predetermined thing in a linear progression
- j. a view of assessment as accomplished by the teacher

Divergent Assessment

Assessment which aims to discover what the learner knows, understands or can do. This is characterised by:

Practical Implications

- a. flexible planning or complex planning which incorporates alternatives;
- b. open forms of recording (narrative, quotations etc);
- c. an analysis of the interaction of the learner and the curriculum from the point of view of both the learner and the curriculum;
- d. open questioning and task;
- e. a focus on miscues-aspects of learner's work which yield insights into their current understanding, and on prompting metacognition;
- f. descriptive rather than purely judgemental evaluation;
- g. involvement of the pupil as initiator of assessment as well as recipient.

Theoretical Implications

- h. a constructivist view of education;
- i. an intention to teach in the zone of proximal development;
- j. a view of assessment as accomplished jointly by the teacher and the pupil.

From this research discussion, it is evident that planning and formulating learning goals is a complex part of formative assessment. Planning may be informed by curriculum, but for planning to be an effective part of

formative practice it must also attend to goals which have emerged from the discourse and experiences in the classroom. Such information must feed forward to planning, where the teacher makes adaptive changes to their planning and subsequent instruction. The teacher's understanding of what constitutes learning is therefore influential in the planning of instruction and forms of assessment integrated with planning.

II. Teaching - Setting of Tasks Through Instruction and Teaching

At the outset it should be understood that some of the strategies discussed in the teaching and assessing phase may occur at the same time although their purposes are different. Teacher discourse during teaching includes questioning, listening, and explaining (using student work and exemplars) as well as the wide range of feedback types more associated with assessing rather than teaching. The tasks are used for learning and for assessing learning as it occurs. In addition, observation usually takes place during a task although its purpose is to develop assessment information. The strategies then, have been organised into phases according to purpose rather than timing

We have seen that to improve learning, assessment information has to be useful for the learner and the teacher. Therefore, while the teacher may have knowledge of excellence or achievement in any production of work, this means little if the concept is not transferred to the students themselves. Again, Sadler's (1983, 1989) theory of formative assessment is illustrative here. The theory includes six elements which are not arranged sequentially. To carry out effective formative assessment the teacher must:

1. Establish the criteria for evaluative judgements.
2. Design tasks so that the criteria are made explicit to the learner before production.

3. Mediate and manipulate the way the criteria are employed in the learner's attempts.
4. Develop teaching methods which make productive use of exemplars--both good and bad--in assisting the learner in establishing their own internal notions of quality or success.
5. Provide effective feedback to communicate what is required to close the gap between the standard of good quality or success set by the teacher and the student's work. This means giving the student effective, on-going criticism.
6. In establishing self-evaluative experiences for the learner and the opportunity to re-work and re-submit work to get closer to the ideal of success.

In examining this list of strategies and skills, Sadler makes it clear that formative assessment differs from all other forms of assessment in that the focus is shifted from what the teacher understands about a student's progress to what the student understands about his or her own learning. Teachers must communicate and negotiate criteria for achievement and provide information and detailed judgements about student work so that students develop a concept of the goal or standard for themselves. In explaining the criteria, teachers may use student or other exemplars to illustrate their judgements. In using exemplars, Sadler notes that this does not limit creativity of response. Students may copy or use features of the exemplar in their work and this should be viewed as a tried and true method of teaching and learning. "Emulation is an ancient and still almost universal learning method. "(Sadler, 1989: 129) If students can articulate what they have learned and have taken and used from exemplars, then this becomes another method of developing self- monitoring learners.

The use of language or discourse in the classroom is therefore vitally important in the establishing goals and closing the gap. Tough (1985) lists the

central uses of discourse as; giving instructions about tasks, controlling behaviour, asking questions, commenting or giving feedback about an activity, giving information, setting a scene, recognising specific needs, giving explanations, maintaining discussions, answering student questions and expressing feelings. Several of these forms of discourse could be termed “assessment talk”.

Both questioning and feedback are types of discourse at the heart of the formative assessment process. In a number of studies, discourse which helps students reflect and talk about their work is noted as fundamental to effective learning. (Johnson and Johnson. 1990; Roderiques and Bell, 1995) However, discourse in the classroom may be complicated by the context or “frame” created by the teacher. Teachers and students are responding to information within this context or “frame” (Bernstein, 1971) at work in the classroom. Bernstein describes this frame as the degree of control the teacher and the student feel they have over the selection, organisation and pacing of knowledge in the classroom. The strength of this “frame” develops from the teacher and then to the student and for that reason may be indicative of the assessment environment. The frame influences the ways students understand and interpret teacher questions and responses. Filer (1995) suggests that questioning and feedback may signify patterns of relationships in the classroom, which may in turn affect students’ understanding and responses. Because formative assessment in the teaching phase is accomplished socially, communication which accomplishes a “shared meaning” between teacher and students is made more difficult due to the complexities of the social dynamics of the classroom (Torrance & Pryor, 1998:185).

Analyses of student-teacher discourse have illustrated how problematic communication can be. Teachers use student responses, even partial ones, as a “resource” to be taken apart and fed back into the learning encounter.

The three -part teacher-pupil IRF interaction sequence previously mentioned is used and extended if the teacher feels the pupil's response is incorrect or not "appropriate". But the "appropriateness" of the response may be judged more in terms of the overall lesson or how the lesson is progressing rather than simply a correct or incorrect answer (Sinclair and Coulthard, 1975:45). During instruction times, teachers are responding to other cues in the class such as behaviour, scheduling, or class organisation. Teachers use questions for a number of purposes and students struggle to understand and make sense of what is being asked of them. Students, for example, often interpret repeated questions by the teacher as an indication that their first response was wrong, while teachers often do so to reaffirm or reiterate the correct answer (Edwards and Mercer, 1987:45). Edwards & Westgate (1987) comment that students need to understand and use the "interactional code" which exists without explanation in classroom. The misunderstanding of questions based on this code can frequently confound the formative assessment process (Torrance and Pryor, 1998). Torrance and Pryor also suggest that teacher's use of questioning and discussion is connected to the issues of power in the social setting of the classroom.

Questioning

Questioning to understand the processes used by the student to complete the work and to probe their understanding of the concepts underpinning the work appears to be an essential strategy of formative assessment in the teaching phase. Questioning which helps to develop critical thinking, reveal thinking processes, direct the student to self-assessment are termed "genuine questions" or "meta-process" and "metacognitive" questioning (Torrance and Pryor, 1998). These questions include open-ended "genuine" questions which encourage the student to develop ideas and concepts, and reveal

learning. In contrast, closed questions elicit responses which are either a correct or incorrect. According to a constructivist theory of learning, teachers need to question in order to gather information on pupil's cognitive constructs.

Questions can be classified in several ways. Bloom's taxonomy (1965) suggests that learning can be sequentially classified according to the level of thinking skills required. Thus the framework moves from lower order thinking to higher. In this system memorization is rated the lowest form of thinking followed by translation, interpretation, application, analysis and finally to synthesis and evaluation, representing the highest-order thinking. It seems clear that teacher questioning should at times be directed to high-order thinking skills including, application of knowledge, and synthesis of understanding, drawing conclusions and making inferences from information. However, this does not appear to be the reality in classrooms. Research by Stiggins et al. (1989) investigated the types of teacher questioning in a study of 36 teachers from grades 2-12. Results indicated that questioning was dominated by factual recall questions. In the science classes for example, 65% of the questions were for recall and only 17% for higher-order thinking such as deductive and inferential reasoning. Questions formulated by students can also reveal thinking and provide information to the teacher on current understanding.

Discourse

Discourse is also important in forming spontaneous learning targets or criteria. The ability to effectively attend to student cues is key to helping teachers develop spontaneous learning targets or goals. As has been shown in the discussion of planning, targets have several forms: subject knowledge, thinking skills, specific behaviours or performance skills, and include the attributes of products they want students to demonstrate. Learning targets are constantly updated as teachers monitor the progress of their individual students.

Targets at this level of specificity would appear to be in the domain of the teacher, rather than curriculum, because they are derived directly from individual student performance. Discourse involving higher-order questions developed by both students and teachers appears to be important to this process. Indeed, research by Johnson and Johnson (1990) has shown that collaborative discourse has been seen to produce significant gains in learning.

The Use of Tasks to Reveal Understanding

Harlen (1978), defines formative assessment as an on-going part of the teaching-learning process as distinct from evaluation which is summative or carried out for the purposes of grading or selection. It is a process of finding out where children have been, what stages in their learning they have reached, as a basis for deciding where and how they might be helped to go further. Selecting learning tasks which are open-ended, conducted in ways where students can reveal their understanding through the product or through the discussion that takes place during the work, provide the teacher with an opportunity to learn what the child knows and can do. Harlen asserts that in formative assessment, a teacher must gather information about a child's experience and the understanding brought to each learning task. By doing this, the teacher can make better decisions about creating the optimal learning environment to improve learning and teaching effectiveness. One could argue from this that setting instructional tasks which can be conducted to reveal student thinking is another element of the formative assessment process. As previously discussed, interest in the conceptual understanding a learner brings to any new situation indicates a constructivist approach to learning theory. Harlen suggests such an approach is an integral part of what teachers do in formative assessment. She has further articulated and given examples of the principles which underpin the process of constructivist learning so vital formative assessment. A task of baking

was selected to provide a means of gathering information concerning a child's understanding of density. Through questioning, the student revealed her current conceptual understanding of weight and size.

After cooking (some tarts) they talked about the difference in the size of the tarts, which had risen. Sarah explained that this was "because the pieces have moved apart in the cooking; it's not really any more (pastry)."

"Would anything have changed in the cooking?"

"Yes, I think they must be heavier, because they're bigger."

From this conversation, all part of working together at the cooking table, the teacher found out that Sarah was not dissociated from size. In fact, the teacher reflected, most of Sarah's experience would have led her to conclude that bigger things are always heavier than smaller ones. The next time Sarah was balancing thing on the scale the teacher made sure the collection included many small, heavy things and large light ones.

(Paraphased excerpt from Harlen, 1978, *Match and Mismatch*)

The example illustrates the teacher's use of the child's understanding of a concept, gained from close observation and questioning during a learning task. From this conversation, the teacher is cognisant of the child's current understanding. The teacher reflects on what this information means in terms of the student's current knowledge. This reflection directs the teacher's instructional decisions. The next experience with various weights and sizes would "close the gap" between current understanding and achieving a correct notion of density, even if that term were not used. The teacher has taught within the zone of proximal development (ZPD) (Vygotsky, 1978:85), making the instruction more

exact and therefore effective. Garnett and Tobin, (1989) found that outstanding teachers were able to “monitor for understanding” in their students using diverse forms of tasks and student-led questioning. A teacher needs specific skills and questioning strategies to monitor for understanding. In teaching therefore, the instructor must have one eye on the curriculum outcomes and expectations and but must also be flexible enough to capitalize on the dynamic interactions which gives rise the emergent criteria, so vital to scaffolding new learning.

III. Assessing -- appraisal and feedback

Studies have shown how teachers gather information and monitor for understanding and achievement. McCallum et al. (1993) found teacher assessment to be an informal or formal set of activities in the classroom, although the means and methods used by teachers varied. Their research in 1992 produced three models of teacher assessment practice at the first Key Stage, and four at Key Stage 2 in 1995. Teachers were asked to sort quotations related to their assessment practice. Responses were analysed against classroom observations and interviews. The types of assessors identified at Key Stage 1 with seven-year-old pupils are most relevant to the present study of Year One teachers working with six-year-old pupils. A brief synopsis of the three models is given here.

Intuitives

Intuitives were minimal adopters of national assessment procedures and objected to systematic recording of TA as a disruption to “real teaching”. They are divided to two sub-groups:

1. Children’s Needs Ideologists who defended a child-centred point of view.
2. Tried and Tested Practitioners showed confidence in modes of pre-national curriculum methods of teaching but were largely inarticulate about their own procedures.

Evidence Gatherers

Evidence Gatherers were teachers who focused on teaching rather than assessing and collected evidence to evaluate later. They were rational adapters because they had adapted in ways that do not affect their teaching methods in any significant way. Evidence was gathered within existing systems and not strictly planned in. Assessment follows teaching to check only what is taught.

Systematic Planners

Systematic Planners were teachers whose planning incorporates assessment into teaching and informs future tasks design. Assessment was fundamentally diagnostic in purpose. A constructivist approach to learning underpins this model. Two sub-groups are:

1. Systematic Assessors gave concentrated assessment time to one group and organized the class to allow them time to do so.
2. Systematic Integrators did not separate themselves from some of the class but moved about gathering evidence for recording and to inform planning.

From these models of practice it appears that teachers evaluate pupil's work in a systematic or unplanned way, asking questions and observing the activities in the classroom. Each piece of student work yields some information about the student's achievement. Though each piece is incomplete and partial, it contributes to the construction of an overall understanding of the child's achievement developed over time in a specific domain. Gipps comments that, "Repeated assessments of this sort, over a period of time, in a range of contexts will allow the teacher to build up a solid and broadly-based understanding of the pupil's attainment."(1995:123)

To accomplish assessment over a range of contexts, teachers select from a range of assessment tools including observation, portfolios, performance assessment, and tests. Research on the effectiveness of some of these methods is

outlined below. However Graue (1993:298-299) describes six dimensions to consider when selecting assessment methods; “ the connecting theme though all of these dimensions is that valid assessment comes out of strategies chosen to provide appropriate information for instructional purposes.” Therefore the teacher’s assessment purpose, either summative or formative, should be considered when selecting a method of gathering information.

Observation.

Observation is recognised as a vital strategy for gathering information, generating ideas and drawing conclusions (Boehm and Weinberg, 1988). There are a variety of forms of observation available to the classroom teacher which range from formal to very informal observation sessions. A brief discussion of observation strategies is given here.

Informal Observation Techniques

1. Anecdotal Records

Brief or detailed notes written during observation sessions provide the teacher with specific information on processes and thinking. The shortest version of this might be the “developmental milestone” notes written on the work or in the teacher’s records. It should be understood that anecdotal notes are both objective descriptions of events and subjective in that they represent what the teacher or note-taker selected to include as salient information. This kind of bias may be limited by attempting to record one event or incident, recording during the event or soon after observing, separating interpretative comments from the factual description and the attempt to use some other kind of information to support the inferences or subjective comments made in the notes (Cartwright and Cartwright, 1984). Anecdotal notes may also include steps which led up to significant events.

2. Specimen Records and Diary Descriptions

Diary descriptions are on-going accounts which chronicle changes in development over time. Entries are made in narrative style and may vary in

length. Careful and detailed notes collected in this way can yield information which should be corroborated through other means such as samples of work. A specimen record is a detailed account of one event in a natural context. Such accounts are useful in identifying minute changes in behaviour. A running record is a form of specimen account. This is a brief but continuous observation strategy used over the course of perhaps 5 or 10 minutes. This approach requires the observer to focus intently on one person. It provides an opportunity to become aware of previously unnoticed behaviours.

More Formal Observation Systems

Observation can become more formal through the use of checklists, rating scales or other means of collecting and quantifying data more systematically. Teachers may develop their own recording systems which more accurately collect the information they need for educational decisions. Formal observation systems include:

1. Category or sign systems that clearly define target behaviours and are exhaustive of the behaviours to be observed;
2. Procedures for sampling behaviour, such as time or event sampling;
3. Standard formats for recording data;
4. Procedures for determining reliability and reduce bias.

Observations may take place during regular work times or during specially prepared performance assessment tasks. (Stiggins 1992:182)

Observation is yet another tool widely used to gather information on the processes used by a student to complete a task.

Use of Exemplars and Portfolios.

Samples of work, the use of exemplars and portfolio collections can be used as formative assessment tools. If the samples are selected by the students and a discussion follows as to why the work deserves to be put in the portfolio,

then they may articulate their notion achievement. Farr and Tone (1994) contend that portfolios have the capability to enhance a learner's skill in self-evaluation. Portfolio collections and discussions do take a great deal of time, which may be considered a significant drawback (Popham, 1995).

Portfolio discussions also confirm the teacher and student judgments about progress and learning, without the use of a test. Observation, either systematic or unplanned, can be combined with tests and other productions such as samples of work and evidence. Airasian concludes, "Teachers should use a sufficient array of indicators to assess all dimensions of the instructional process. This is the single major recommendation that can be offered to improve the quality of interactive assessment." (Airasian, 1991:140) Teachers need a wide sample and a good number of interactions and responses. They must make a conscious effort to assess the progress of learning, not just pupil involvement, and include both assessment tasks, and more formal information about student achievement, including tests.

Feedback and Use of Assessment Information

Teachers need to make effective use of the assessment information they gather. Although a teacher may have collected valid information on student learning, they may not use the information effectively in their teaching. Fuchs et al. (1991) studied the use of an "expert system" whereby teachers could use the assessment results of their students to plan subsequent lessons. The use of the expert system in the study resulted in a change in the teaching strategy. The study suggests that teachers need both good assessment practices and instruments and training to responding to assessment results in an effective manner. Another review by Fuchs and Fuchs (1986) designed a meta-analysis of 21 other studies, which include research studies involving pre-schoolers to grade 12 students. The studies were matched to allow comparison; all included

experimental and control groups and all involved similar frequencies in assessment. Half the teachers were given set rules about reviewing the assessment data and actions to follow. The results suggest two important points. First, an inductive approach to formative assessment which required the teachers to respond to particular problems or features of student work was most effective. This confirms Torrance and Pryor's conclusions on the importance of Divergent Assessment. Second, learning was also most improved when the teachers communicated achievement most clearly through charts or graphs of progress and were required to adhere to set rules to respond to assessment information. In other words, they had to add to or change their practices to include clear feedback involving discussion or other means. This second finding suggests that teachers need to conduct some form of record-keeping to track progress.

If formative assessment is effective, over time students should begin to analyse their own work and develop the skills for self-assessment. (Gipps, 1993) Work by Schunk, (1996) confirms this approach. The study involved 44 nine-year-old students working on a unit teaching fractions. The students were divided into four groups; in two groups performance goals (solving the problem and getting the right answers) were stressed, for two groups learning goals (how to solve problems) were stressed. For each set of goals, one group had to evaluate their problem-solving skills after each session, while the other group completed an attitude questionnaire. The effect of frequent self-evaluation outweighed the effect of either type of goal.

Feedback is indisputably a key element in formative assessment and is an element of various learning models (Bloom 1971, Nitko, 1996). A review by Bangert-Drowns et al. (1991) studied the instructional effect of feedback from tests through an analysis of 58 experiments taken from 40 reports. The largest

influence on performance was the quality of feedback. The elements of high quality feedback have been researched both in ecologically-valid settings such as regular school classrooms, and in studies carried out in specifically-designed research conditions. Feedback which focuses on the processes involved in the production of work rather than the product appears to enhance learning. Feedback which focuses on how to correct of errors rather than simply whether an answer was correct or not was more effective (Elshout-Mohr, 1994). Research also shows that comments on strategy and suggestions on how to improve was determined to account for improvement in learning and the reduction of gender differences in a large study by Elawar & Corno, (1985). Further research suggests that feedback that directs attention to the self rather than the features of the work, even if the feedback includes praise, can have a generally negative effect on learning (Siero and van Oudenhoven, 1995).

According to Sadler (1989: 121), the teacher must be very clear as to what is to be learned, what constitutes fine performance, and what is lacking in the student's work. Students require feedback on how successfully their work matches the criteria for achievement. The student must then engage in appropriate action which leads to some closure of the gap between the goal and the student production. The result is a kind of feedback loop whereby the student makes adjustments to their work and understanding during the task and at the end of the work, according to the evaluations made by the teacher. Correction is fundamental to the feedback process (Kulhavy, 1977). But simply confirming correct answers has been shown to have little effect on future performance (Crooks, 1988). The teacher must be clear as to what must be done to improve the production or what is the next step. This may be to have the task or concept re-explained, to attempt further practice or to move on to a progressively more difficult stage (Gipps, 1990).

Again the problems relating to communication surface. In providing feedback to learners, teachers may refer to criteria set out before instruction

begins, such as curriculum statements of attainment, and some which develop during the evaluative discussions which take place between collaborating teacher-expert and student/novice. But Sadler notes that, as well as employing their “guild knowledge” of the subject, teachers may also develop their own subjective norm-referenced standards about students in their current class based on previous student accomplishments. For this reason, criteria for success must be made accessible and explicit to all learners, and to the teacher, to prevent value-laden distortions or bias. Often assessments made by teachers during the teaching process can be limited and based on weak or limited criteria (Harlen and Qualter, 1991).

Research on feedback contributes to the notion that learning is more effective when teachers can respond to specific gaps in student performance. The purpose of feedback, in general, is to bridge the gap between student production and the goal, and to make the learner more aware of the criteria for achievement. Gipps and Tunstall (1996) have developed a typology of assessment feedback based data collection from forty-nine children in eight school settings. Set on a descriptive-evaluative continuum, the 9 types of feedback included positive and negative feedback, process- and product-related feedback, feedback based on the use or non-use of explicit criteria, and feedback related to classroom management. The typology is especially useful to the present investigation, because it provides a basis for analysing teacher-student feedback communication.

Figure 2.4 Tunstall and Gipps (1996) Typology of Feedback

ASSESSMENT FEEDBACK: A TYPOLOGY

	TYPE A	TYPE B	TYPE C	TYPE D	
1 POSITIVE FEEDBACK	rewarding	approving: positive personal expression	specific acknowledgement of attainment	mutual articulation of achievement	1 ACHIEVEMENT FEEDBACK
		warm expression of feeling	use of criteria for work or behaviour; use of teacher models	additional use of emerging criteria; child role in presentation	
		general praise	more specific praise	praise integral to description	
		positive non-verbal feedback			
2 NEGATIVE FEEDBACK	punishing	disapproving: negative personal expression	correction of errors	mutual critical appraisal	2 IMPROVEMENT FEEDBACK
		reprimands; negative generalisations	more practice given; use of teacher models	provision of strategies for self regulation	
		negative non-verbal feedback	training in self-checking		

EVALUATIVE ←—————|————→ DESCRIPTIVE

For the purposes of this study, the typology provided several categories for the analysis of transcripts and also suggested topics to pursue in probing the teacher interview notes. For example, might teachers who most often give feedback on explicit criteria also be those who were most influenced by curriculum outcomes and targets?

Towards a Model of Formative Assessment: Tools and Teacher Practices

The importance of assessment in the Planning/Teaching/Assessing cycle has been reiterated by most research (See Figure 2.1 Mitchell and Koshy, 1993) But what does formative assessment look like in practice? How are the formative assessment strategies identified in the review of literature used in a real classroom, and how can they be observed? As I have shown, research suggests that formative assessment is a “deep” rather than “shallow” teacher activity embedded in practice and complicated by the social interactions of the classroom. The analysis of the formative assessment strategies of the case study teachers attempts to describe the strategies they use and to develop a model of integrated assessment practice within the teaching/learning/assessment cycle. Such a model is constructed with the caveat that the full potential of formative assessment cannot be magically realised simply by adding these strategies to classroom practice. The framework is primarily useful as a means of investigating classroom practice in this study. As has been clearly noted, formative assessment is a “complex social and educational practice”. (Black and Wiliam, 1998b, Torrance and Pyror, 1998) However, the research “conclusively indicates that formative assessment does improve learning.” (Black and Wiliam, 1998b: 61) Therefore to reflect on strategies associated with formative assessment provides a structure for understanding its potential for improving learning.

The conclusions of the Black and Wiliam review support a move toward identifying skills and strategies directed at improving formative assessment. “These (formative assessment) elements would be the setting of clear goals, the choices, framing and articulation of appropriate learning tasks, the deployment of these with appropriate pedagogy to evoke feedback,... the appropriate interpretation and use of that feedback to guide the learning trajectory of students. Within and running through any such plan should be a

commitment to involving the students in the processes of self- and peer assessment ... underpinned by a constructivist approach to learning.” (Black and Wiliam, 1998: 61) The strategies discussed in this chapter are summarised below. The summary provides a useful starting place for the development of the case study method of analysis used in this research. A full explanation of the methods of data collection and analysis used in the case studies is provided in the next chapter.

Formative Assessment Practice—An outline of key strategies

Planning

Planning is based upon:

1. curriculum requirements/ outcomes
2. information of current student achievement and conceptual understanding (used to “feed forward” into planning)
3. self-monitoring of teaching effectiveness and planning adaptive strategies

Teaching

Teaching which is supported by formative assessment strategies makes particular use of:

1. “genuine” questioning techniques
2. expert or student exemplars
3. modeling and guided practice
4. communicating planned and emergent goals and learning targets
5. conducting tasks so that student thinking is revealed.

Assessing and Feedback

Effective formative assessment attempts to:

1. communicate to students through questioning and feedback their current level of achievement as it relates to the planned and emergent criteria
2. give students feedback information to close the gap between current achievement and improvement
3. collect and/or record information on current achievement and conceptual understanding (through such means as questioning, formal or informal observations, anecdotal notes, tests, standardised assessment materials, portfolios or collections or examples of work)
4. Information gathered must be used for timely descriptive/evaluative feedback to the student to promote self-monitoring skills, to make adaptations in teaching strategies and to make adaptations in planning.

Research Questions

In chapter one of the review of literature, the influences on formative assessment, both at the political level and at the micro-level of the school were surveyed. In chapter two, a review of the literature on formative assessment from several perspectives was used to develop an understanding of the elements important to its practice. The case study investigations were designed and conducted to pursue questions relating to formative assessment strategies as they are practiced in the Year One classes. The investigation also pursued information on the way strategies might be linked together and integrated into practice. Data was collected on the use of a criterion-referenced curriculum for assessment purposes. Finally, the study investigated the influences, other than curriculum, on the development of teacher formative assessment practices. The key areas of this study are summarised in the research questions given below:

1. According to the teachers interviewed and surveyed in the study, what sources of influence have contributed most to their formative assessment practice: curriculum, head teachers, INSET, colleagues and/or experience in the classroom?
2. Did the teachers use the Statements of Attainment given in the National Curriculum for formative assessment purposes? Did they use the Statements of Attainment for other purposes in their work?
3. What formative assessment strategies are practised by the case study teachers? In what ways are formative assessment strategies integrated into the teaching, planning and assessing phases of the teachers' work?

Chapter Three Methodology

Background to Selection of Research Methodologies and Analysis Procedures

Research Paradigms

At the heart of any research lies an inherent perspective on the way knowledge is constructed and known. Such an underlying set of beliefs concerning reality and knowledge is termed a paradigm. In the present age, research paradigms fall broadly into two very different approaches. The most dominant paradigm has been the conventional stance, also termed a positivist, or empirical research paradigm. It asserts three defining notions. First, that there exists a single truth or reality that is knowable and operates according to natural laws or cause-effect relationships. Second, that realities or effects are possible for an observer to separate out from their surroundings. The purpose of any disciplined investigation is to isolate the truth from its natural setting through methods such as experiments. It is believed that research can be conducted without the influence of any human values, or biases. Indeed the third principle of the paradigm relates to methodology. Much of research attempts to strip away any confounding variables to see truth clearly, explain how it works and in the end, be able to predict and control its workings.

A Research paradigm for this Inquiry

The research conducted for this thesis is in essence, an inquiry into human interaction. As such it focuses on teachers' actions, their underlying conceptual understandings of formative assessment, and the relationships these teachers have developed with others in the natural setting of the school. The goal is to understand rather than to explain and define causality. Given such a research focus, an alternate research paradigm is required to investigate the research questions in this study. The interpretivist paradigm provides the most

appropriate framework. Critical to this paradigm, as in the positivist system, is a particular stance regarding the way knowledge is constructed, how it can be known and finally, what methodological procedures follow from these beliefs.

The Interpretivist Paradigm

Knowledge from an interpretative perspective implies constructions that are created through an interactive process. These constructions *are* the “realities “ of the situation, insofar as they are agreed upon by those involved as an accurate articulation of their understanding. Logically therefore, constructions are inextricably enmeshed with the social, physical and psychological contexts of the research contexts According to Guba and Lincoln, (1992:9). “In a very literal sense, the context gives life to, and is given life by, the constructions that people come to form and hold.” For this reason, findings from this type of research are assumed to be valid for that particular setting only and cannot be generalised to other settings. Contrary to the positivist attempt to expunge bias and values from affecting results, the interpretivist researcher seeks to uncover the values inherent in participants’ understanding of reality. “Valuing is an intrinsic part of the evaluation process, providing the basis for attributed meaning (Guba and Lincoln, 1992: 109). In this paradigm the notion of causation is understood in a different way than in the positivist paradigm. From an interpretivist point of view, any observed action is “the instantaneous resolution of a large number of mutual, simultaneous shapers, each of which is constantly shaping, and being shaped by, all other shapers. “ For this reason, a successful inquiry is directed, not towards determining root causes, but to determine the range of “shapers” which may be key to understanding and simplifying a complex question. “ As I have suggested in chapters one and two, formative

assessment is not only enmeshed in practice but it is also shaped by a wide variety of possible influences. The research attempts to provide a better understanding of the processes in formative assessment in the planning/teaching and assessing phases of teacher practice and to describe the relative power of the influences or shapers for each teacher in the study. Associated with the interpretivist paradigm is the use of constructivist methods of inquiry. For the purposes of this classroom-based research, such tools are aptly suited because “the success of a constructivist inquiry can be judged on whether it displays ever-increasing understanding of its phenomena.” (Guba, and Lincoln, 1992:107)

Implications of a Constructivist Inquiry for Methodology

The acceptance of an interpretive, naturalistic research paradigm directs the researchers' selection of approaches and methods. In general these may include: collecting qualitative information using people and their actions as the primary data-gathering instruments, the uncovering of tacit knowledge, purposive sampling, inductive data analysis, grounded theory, emergent design, negotiated outcomes, case-study reporting, and the tentative application of findings (Guba and Lincoln, 1985). More specifically, the principle criterion of the method must be to use instruments to gather information that can help to expose or uncover the constructions of the concerned parties involved and to make sense of the interactions that occur. A brief explanation of the process can be outlined. To begin with, some early form of “sense-making” must be carried out to capture the constructions that already exist. What must follow is a reiterating process of re-analysis of the constructions on the basis of new information, until some kind of consensus of understanding can be established. According to Guba and Lincoln, “Methodologically . . .the naturalistic paradigm rejects the

controlling, manipulative (experimental) approach that characterises science and substitutes for it a hermeneutic/dialectic process that takes full advantage, and account, of the observer/observed interaction to create a constructed reality that is as informed and sophisticated as it can be made at a particular point in time.” (Guba and Lincoln, 1992:44) The methodological process where the researcher collects data to fully describe contextual factors and actions in the research setting, and develops the constructs which emerge from the analysis of the data in concert with others, leads to the selection of the case study approach. This approach provides the best means for collecting the data necessary for the detailed explication of the processes underpinning formative assessment. Chapter Two has outlined the practices most closely associated with formative assessment. In that chapter, discourse between students and their teacher was identified as a significant mode of assessment practice in both the teaching and assessing phase of practice. The case study approach provides an appropriate means of observing teacher practices, analysing dialogue, as well as confirming ideas and constructs inferred from it with students and teachers. It also provides the best setting to observe the teachers in the planning, teaching and assessing phases of their work. However, a more detailed examination of the case study approach and the way it has been applied to collect detailed information for this research study is necessary.

The Case Study Approach

Case studies are not often used to test theories, but they may be used to build or generate theories where little or inadequate theories exist (Merriam, 1988:59). Eckstein calls theory-building cases “heuristic” because they aim to find out (Eckstein, 1975). In general, case studies are used to build theory using an inductive rather than deductive mode of thinking. The goal is discovery rather than verification. However, that is not to say that the researcher enters the field

without any knowledge. In fact, the researcher generally holds assumptions, theories or organising concepts which contribute to the research questions and the selection of methodology. As has been shown in Chapter Two, the formative assessment field of research has developed greatly in the last ten years, to the point where detailed investigations of specific elements of its practice have been researched through both qualitative and quantitative means. The literature review presented that background as a starting point for this research.

Over the course of the analysis of the case study investigations, a model was constructed as a focusing framework to be revised and developed. As a necessary first step, some of the practices used in the model were identified from the literature review and used as initial categories for data collection in the case study settings. Hammersley et al. confirm this approach, maintaining that, "There must always be selection criteria and these are derived, in part at least, from theoretical assumptions, from ideas about what produces what." (Hammersley, Scarth, and Webb, 1985:45) Patton also notes that every researcher has "theoretical dispositions" that affect the focus of the study. Case study is tied to theory either as a receptacle for putting theories to work or as a "catalytic element" in the uncovering of theoretical knowledge (Eckstein, 1975:100). Whether the case study is used for either of these purposes depends on the state of understanding, theory and knowledge in that particular field. This research attempts to use what is currently known regarding formative assessment as a "catalytic element" in order to develop more understanding about its practice and the influences which shape it.

Pros and Cons of Case Study Research

At the core of case study research is observation. For research that attempts to explain phenomena occurring in the subjectively structured world of the classroom, observation techniques have several important advantages. Case study data is "strong in reality" but difficult to organize. Case studies allow

generalizations only about a particular instance or a series of particular instances. However, their strength lies in their attention to the complexity and subtlety of social interactions. In case studies, it is possible to recognize the embedded nature of social constructs and respond to the discrepancies arising in the data. The resulting reports may be more accessible to readers and can serve multiple audiences. They can also serve as a “step to action” for the settings they represent; their insights can be interpreted and put to use for staff or individual development. (Adelman et al. 1980) Bailey (1978) also suggests that:

1. Observation studies are superior to experiments and surveys when data are being collected on non-verbal behaviour.
2. In observation studies, investigators are able to discern on-going behaviour as it occurs and are able to make appropriate notes about its salient features.
3. Because case study observations take place over an extended period of time, researchers can develop more intimate and informal relationships with those they are observing, generally in more natural environments than those in which experiments and surveys are conducted.

But case studies present challenges and problems in methodology as well. Critics suggest that case study reports can appear too subjective, biased, impressionistic and lacking in quantifiable measures. Questions concerning the validity of the results are also identified. Can there be any external validity from case study research? In other words, can the results be generalised to any other setting? Is the internal validity of the research maintained by the methods and instruments used? Are the findings based on scrupulous checking and cross-checking of data and interpretations? In response to these challenges Denzin outlines the basic steps in the observational case study approach, which is termed “Analytical Induction”.

1. A rough definition of the phenomena is formulated.

2. A hypothetical explanation of the phenomena is formulated.
3. One case is studied to develop more understanding of the phenomena.
4. If the hypothetical explanation does not fit the data, the explanation must be revised and redefined.
5. More certainty may be attained after a small number of cases has been examined, but the discovery of negative cases may disprove the explanation and a reformulation is required.
6. This procedure of examining cases, redefining the phenomenon, and reformulating the explanation is continued, each negative case calling for a reformulation of the definition or interpretations.

(adapted from Denzin, 1970)

In conducting the case studies, I used this basic procedure. The elements of formative practice discussed in Chapter Two provided an initial understanding, but I was not able to find literature to clarify the relationships between planning, teaching and assessing in practice. After two case studies, a model of integrated practice emerged. The explanation was then refined and reformulated through the examination of the data from two subsequent cases, accommodating new categories and constructs not previously observed or understood.

Four studies were conducted to give a substantial multi-case sample. The detailed report of three case studies gives a clear understanding of the research. The report on the first case study, St. Michael's school, is included in the appendix of the thesis. The data from this first case is incorporated where it contributes to the analysis.

Data Collection Research Instruments

I will now list and discuss the research instruments used in the case studies.

Pre-Case Study Data Collection

Interviews with Curriculum Designers and Experts

A series of interviews was conducted before entering the case study settings to develop an understanding of the design and purpose of the National Curriculum and its potential influence on teachers. Of specific interest was the use of a criterion-referenced design, using assessment criteria called Statements of Attainment. The information gathered from these interviews provided information directly used in the analysis of the curriculum found in Chapter One and in the formulation of the research questions in Chapter Two. Using a prepared interview schedule (See Appendix 3.1), 10 interviews were conducted over the course of the year.

Three interviews were conducted to gather information on the design of the curriculum and the implementation process. These subjects were selected because of their work and expert knowledge of the curriculum and the way it was developed.

- Eric Bolton--National Curriculum Council member
- Joan Clanchy--former NCC member and headmistress of North London Collegiate School
- Prof. D. Lawton--Curriculum Expert--Institute of Education, University of London

On the subject of assessment in the National Curriculum, two interviews were conducted to gather information on the assessment requirement of the curriculum including the ways TGAT and the SATs might influence teacher practices.

- Prof. Paul Black--Chairman and co-author of TGAT—Task Group on Assessment and Testing
- Dr M. Sainsbury--National Foundation for Educational Research in England and Wales (NFER), Department of Assessment and Measurement - SAT development for Key Stage 1

Three interviews with curriculum writers were completed to ascertain the learning and assessment theory behind the design of the National Curriculum.

- Prof. Brian Cox--Chairman of the working party on the English National Curriculum
- Prof. M. Brown--member of the working party on the Mathematics National Curriculum
- Prof. W. Harlen--member of the working party on the Science National Curriculum

Finally, interviews with In-service trainers, at the LEA level and at the University level were conducted. These interviews shed light on the in-service training received by the teachers in this study. The data also revealed both the processes and the problems which arose during the implementation of the National Curriculum.

- Ms C. Brogan--Assessment Co-ordinator for LEA Educational Authority
- Ms S. Clarke--INSET on Assessment -lecturer- Institute of Education, University of London

Pilot Study

Prior to the data collection year, several research strategies were examined and carried out in a pilot classroom. The purpose of the pilot was twofold. First, it provided a method of training in a wide range of case study research instruments including observational note-taking, audio taping discourse and transcription, follow-up interviewing techniques, piloting of interview schedules and questionnaires. This was done to improve the quality of the data collected in the case study schools. It also helped to clarify and develop the case study methodology in important ways; it led to the selection of a different role for the researcher in the classroom and to the use of multi- case study approach.

Conclusions from the Pilot Study

The importance of the pilot study cannot be overstated. In terms of research training it was fundamental. Principally, note-taking techniques, use of the tape recorder, developing a researcher's rôle in the classroom and questioning abilities improved dramatically over the two months. The pilot also precipitated a major change in research strategy described in the conclusions which follow.

Note-taking and Observation

Balancing contextual information and discourse detail proved difficult. The use of the tape recorder was problematic at first and resulted in my use of two tape recorders, one on the teacher and one near the student. This allowed me to fill in detail after the session. However, the greatest difficulty became the opportunity to conduct the observations without interference. The rôle of teacher assistant was inappropriate because when I was recording and note-taking the children kept asking me for help. Even when the teacher told the children, "Mrs Elliott is learning about teaching and needs to take notes on her own," this did not always work. The children were used to an aide who helped when the teacher was busy with an individual group or person.

On two days, I experimented with a systematic observation technique, noting teacher activity every 15 seconds for five minutes during a teacher interaction with a group. Afterwards I reviewed the data which contained fragments of teacher questioning, listening, praise, instruction correction and feedback and so on. While I developed a list of teacher activities, the list told me nothing of the quality or character of these interactions; I could not tell whether the questioning was to find out what the child knew already, how the child had understood and carried out his or her work, the kind of feedback the child received--all of which are important to ascertaining the quality of formative assessment. Thus I abandoned a systematic observation schedule and went back to noting specific discourse and tape-recording teacher-student exchanges.

Also during the course of the pilot I found that identifying specific children to watch was problematic in two ways. First, it was difficult to get sufficient times to watch the teacher with those particular students. While being in one class a whole year might help this, I also found little significant variation in the teacher's practice with these children, although the work was to some extent individualised. The only significant difference was the increased amount of individual time given the behavioural student and the increased amount of record keeping she did on this student.

Secondly, throughout the pilot I found it increasingly revealing to ask as many students as I could several questions:

- What are you supposed to do?
- What are you learning about?
- Is this good work?
- How do you know this is good?

These simple questions gave me a clear idea of whether the criteria for task completion and to some extent, achievement, were understood by the student. Communicating the criteria in some way is a fundamental element of

formative assessment. I decided then to keep these four questions in the list of data collection sources and avoid the selection of a cohort.

Developing the Researcher's Rôle

After three sessions in the pilot school, I realised that the rôle of teacher's aide was not going to allow me the distance and stance of objectivity required to collect data. At no point could the teacher accept me as a teacher's aide given the kind of questions I asked her about her work as a teacher during the interviews and after the work sessions. Increasingly, I was left alone working with groups and then asked about their progress. The teacher was very systematic in her recording and used the National Curriculum Attainment Target--Class Record constantly to check off "coverage" of the Statements of Attainment. She wanted me to decide about achievement for the children in my group; something she did not ask of a teacher's assistant. The time pressure and the sheer number of statements to be covered made her seize on the opportunity to solicit my opinion on individual children, even after I explained I was not there to make teacher assessments but to watch her make them. At the end of the pilot, we discussed this problem and she felt I would have the same difficulty in any classroom unless the teacher did not know I was a teacher myself. After discussion with my supervisor it was determined that a teacher's aide rôle was inappropriate and a more distant researcher's stance was indicated.

Changes in Research Plan and Questions as a Result of the Pilot

Three major changes occurred because of the pilot. First, it was determined that the rôle of the researcher should be more of an observer, rather than participant, although because I sat with children and asked them several questions while they worked I was still participating to some extent. Secondly, it was decided that the note-taking should focus on the three core subject areas of

Maths, Science and English, with notes on context, other subjects and whole-day routines added in less detail. This would enable me to see how assessment information gathered by the teacher might feed forward into planning and feedback to the pupils. Thus, to provide a way of seeing the whole planning, teaching and assessing cycle, the data collection took place every day. Observing in the classroom every day also allowed me to collect data on teaching strategies until practices were observed to be repeating and the data was yielding no new or clear variations of categories. In addition, to describe connections between planning, teaching and assessment, data had to be collected on the thinking done by teachers between lessons or whole class discussions. Looking at a planning sheet would not be enough to track thinking. Interviewing the teacher about a plan they had prepared before a lesson, coupled with a post-lesson discussion about what they perceived as the next step or which pupils had understood or learned the new concept, and then observing that feedback used in the planning and teaching of the next lesson would be necessary to see the entire assessment-teaching-planning feedback loop. Again, for this reason, data collection took place every day.

The last major change was to modify the case study from one year in one classroom to data collection over an intensive 3 or 4 week period in several classrooms, selected from one LEA, but which would provide a range of school contexts and a variety of teachers. The case study approach was still used but became a multi-case study format: approximately 3 weeks were spent in each school, including many pre- and post-visits and interviews. More time was necessary in some schools to get the set of data completed because of school trips, etc. It was also necessary to return beyond the case study period to observe all three core subject areas.

A multi-case study approach instead of a single case study was selected for several reasons. First, the pilot study suggested that a participant observer role would not be suitable because the relationship developed in two or

three sessions into a team-teaching situation rather than a teacher and the researcher one. In addition, the literature has suggested assessment understanding and practices vary greatly between teachers. If I spent a year or more with one teacher whose practices was either very developed or not developed at all, the possibility of building a model of practice might be inappropriate. A multi-case approach allowed me to collect data on a wider range of practices and observe several ways of integrating assessment practice. It permitted close observation of the complexity and specificity of the classroom context, the variance of the strength of framing and construction of power in the relationship between students and the teacher. The variation in discourse patterns, use of questioning and feedback was dramatically enacted. The use of comparison and contrast was available to me in making inferences and developing themes because of the multi-case format. In all, while it is well noted that the data from this study is not representative, generalisable or normative in any way, the data from several cases required an analysis that could accommodate more complexity and diversity than the single case might yield. The cases were meant to build on each other, creating a means of refining and developing themes across settings and teacher styles.

Data Collection through Case Studies

Description of the Research Settings

The sample of four schools in one LEA provides some homogeneity of context; all the schools had the same type of funding, INSET support and LEA directives. At the same time, there were differences between the schools: one was a Roman Catholic primary, another a Church of England school, the third a primary with a low socio-economic catchment area and the last with a high socio-economic intake. This was done to invite comparisons and disconfirming

findings based on the variables of school context. Miles and Huberman (1994) call this type of sampling “purposive”.

The LEA which provided the setting for the pilot was also the setting for the study itself. This LEA was selected because it provided a great diversity of schools, including inner-city London, high and low socio-economic contexts and church-affiliated state schools. It was also the most feasible in terms of access and proximity. As an overseas research student not connected with a large, well-known and funded project, it was appropriate that I use the contacts and knowledge of the LEA I had developed. Permission was granted from the LEA in early September, 1993 (See Appendix 3.2). The LEA has 33 infant/junior schools. These were contacted first by letter and then by telephone. Initially, 10 gave tentative approval. From these 10, four were selected and three put on reserve after a discussion with the head teacher concerning:

- size and location of school;
- teaching experience of Year One teacher;
- social and economic context of the school.

The four schools selected provided a range of contexts. The first case study school, St. Michael's RC Primary, is presented in its entirety in appendix B for two reasons. The school context was markedly different from the other case studies and as a result, the data provided a series of missed opportunities for formative assessment. The case did not in itself lead directly to the development of the study's model of formative assessment. (See Figure 8.1) In addition, the case was appended to comply with the thesis length requirements established by the university. A summary of each school is given below. To ensure confidentiality, all names of schools and teachers have been changed. Low socio-economic catchment was determined through head teacher interview and proportion of students receiving free/ subsidized school dinners. The ratio of boys to girls in 1993-4 was near to equal.

Case Study School 1: St. Michael's Primary RC

St. Michael's R.C. Primary School is a Voluntary Aided Primary school located in inner London. At the time of data collection there were 201 children on the school roll. According to the head teacher, the school population comes from mainly low socio-economic and new immigrant backgrounds. The head teacher also reported that 75% of students are bilingual and upwards of 40 students received free school meals. The ratio of boys to girls in 1993-4 was near to equal.

Case Study School 2: D'Arcy Rd. Primary School

The school had 207 students enrolled, with 83 children eligible for free-school meals. The catchment area is mixed council flats and owner occupied. The population includes many educated professional parents who are very active in the school. The head teacher reported that these parents have put pressure on the staff to improve the academic standards of the school and have been very vocal about the results from Key Stage 1 testing. While most students were born in England, the school has a large number students speaking Chinese or Bengalese at home. The ratio of boys to girls in 1993-4 was near to equal.

Case Study School 3: Alexandra Primary School

The catchment area includes pupils from a middle to high socio-economic background. At Alexandra Primary, the school culture is greatly influenced by the music programme. The area includes a large number of expensive private schools, however, Alexandra school is selected by many parents because of the reputation of the director of music. At the time of data collection there were 208 enrolled in years Reception to Year Six. Sixty-two students were eligible for free school meals. The school is ethnically mixed with no dominant group. The ratio of boys to girls in 1993-4 was near to equal.

Case Study School 4: Holy Name Church of England Primary School

There were 176 children attending the school from ages five to 11 during the data collection period, making this the smallest school in the sample. The school is very multi-cultural. A third of every class speaks a language other than English at home. About half the pupils come from single-parent homes. The children come from a mixed socio-economic background; while there are many new immigrant children, the school is also selected by middle class parents who desire a small school with a strong religious affiliation. 54 students get free school meals. The school is overseen and directed by the governing body from the church. There were slightly more girls than boys enrolled in the data collection year, but generally the ratio is near to equal.

Instruments and Emerging Methodology.

Data collection at each school took place over a period of three weeks to a month. This included periods of observation in the classroom, follow up interviews with the teachers, attendance at staff meetings and lunches, time in the classroom and the office collecting documents, interviewing the head teacher, the year two teacher, the assessment co-ordinator as well as administering questionnaires. A detailed description of the data collection is given below.

Classroom Observation and Discourse Data

The research focus of the case study attempts to describe the assessment practices of the Year One teacher in each case study school. The methodology here was directed by the current theory on how formative assessment might be enacted in the classroom. Formative assessment integrates planning, teaching and assessing in some way. Information gathered by the teacher through discourse with pupils must in some way promote feedback to the pupil and feed forward into subsequent teacher planning. If I wanted to explain the ways in which these elements might be integrated, it was necessary to gather data *continuously* over the course of a unit or topic in each of the three

core subject areas. It was important to try to track both the feedback and feeding forward process if it occurred. To accomplish this it was necessary to repeat a three part observation/interview/observation sequence:

- Observe the teacher interact with the pupils using audio tape and descriptive notes.
- Interview the teacher briefly at the end of a lesson or the day as to what happened in the encounter and what she learned from it, thereby confirming and developing some consensus between the teacher and myself as the content of the collected data, and at the same time investigating teacher thinking.
- Collect information as to the ways in which the teacher used (or did not use) that assessment information to plan and carry out the next academic experience for the pupil. In other words, was there any adaptation made to the next lesson as a result of the teacher's understanding and use of the pupil's demonstrated achievement or articulated understanding?

These three steps were repeated many times and information was gathered for Language, Math and Science. At times the sequence occurred several times in a day. Generally the next teaching session took place the next day or the next afternoon, or even later in the week. The most difficult subject to collect information on was Science. During non-participant observation periods I did not interact with the children or the teacher, but recorded dialogue and non-verbal cues as accurately as possible. I also tried to write descriptions of the contextual information (class organisation for teaching, setting, participants, mood, etc.)

Daily Follow-up

After each day in the classroom, I completed my notes and made tentative lists of ideas relating to assessment practices. These ideas were collected and divided into comments relating to:

- a) developing methodology and problems;
- b) types of assessment tools used;
- c) planning and using ATs;
- d) recording techniques
- e) use of questions for diagnosis, understanding of child's concept of the task, nature of instructional comment, use of comments to feedback and feedforward;
- f) teacher response to research-effects of researcher on the classroom;
- g) student understanding of task and criteria for achievement.

Daily memos and summary sheets were used to write up observation notes. In this way, patterns and new questions could be followed up the next day. Analysis of data occurred during the collection period as well as after it. Tapes were checked and discourse notes were developed more precisely. Because I was returning to the school the next day, transcriptions of exchanges were not completed until the end of the week. However, many of transcripts were also discussed with the Year One Teachers in each school. An inventory sheet was used to make sure the required school documents had been collected. In several cases, follow-up interviews took place to ask questions that had not been prepared beforehand.

Interviews

Several forms of interviews took place during the data collection period. The advantage of interviewing is that one can gather "descriptive data in

the subject's own words so that the researcher can gather insights on how subjects interpret some piece of the world." (Bogdan and Biklen, 1982: 135) A semi-structured interview schedule which contained factual, opinion and open-ended questions was used to ensure the interview captured all the data necessary, but also reduced the effects of bias. This problem was addressed in the data collection in several ways as suggested by Oppenheim. Adhering to the interview schedule as much as possible reduced the bias associated with the rephrasing of attitude questions, altering of factual questions and careless prompting and biased probes. It also prevented asking questions out of sequence or omitting them. The interviews, except one in which the interviewer declined to be recorded, transcribed to avoid biased recording of verbatim answers (A.N. Oppenheim, 1992:96-97).

1. Semi-structured Interviews

Semi-structured interviews were conducted with the Year One teacher, the head teacher, the assessment coordinator in school and the Year Two teacher conducting SATs. Questions on the interview schedules had been piloted, and re-written with the help of my supervisor. (See Appendix 3.3) The interview questions gathered data on the contextual information about the school, probed opinions about the National Curriculum and its implementation, and investigated the interviewee's ideas concerning the effect of the assessment requirements on teachers and their practice. In all, the interviews helped to describe the school context in relation to its attitudes to the changes in education, and the pressures experienced in the school. They contributed also to the Year One teacher's reports on the influence of colleagues on her assessment practice. This was one of the research questions of the study.

2. Year One Teacher Interviews -- Semi-Structured Interview.

A more in-depth interview was conducted with each Year One teacher. (See again, Appendix 3.3) The interview schedule deliberately included

issues probed in the questionnaire. This was done to confirm the data collected and add detail and context to the opinions expressed. The interview gave the teacher an opportunity to discuss their understanding of assessment and learning, their views on their training, the school, and to explain their professional and academic background with more detail. This was completed near the end of the observation period when the teacher felt most at ease with the questions and the interviewer.

3. Semi-Structured Interviews with Head Teachers

The interviews took place over two sessions of one hour each. These interviews followed a set of prepared questions at the outset, followed by questions relating to observations made by the researcher during the course of the week. (See again, Appendix 3.3) The responses on the questionnaire were useful in determining the school context in assessment and the National Curriculum. The interviews also provided detailed information concerning the ways the head teacher had implemented the National Curriculum revealing their style of leadership. As was discussed in Chapter One, the role played by the head teacher has been determined as influential in the implementation of change and whole school effectiveness. The interview schedule was given to the head teacher before the interview so that he/she could gather their thoughts as well as any appropriate documentation that might be useful in establishing school context.

4. Semi-Structured Interview with Year Two Teachers

An in-depth interview with the Year Two teacher in each school was conducted to assess the differences in practices and attitudes to teacher assessment between Year One and Year Two teachers, if any, and to determine the influence of the pressure of SATs. It was not possible to conduct observations of all the Year Two classes but samples of work, written and recorded assessments and planning materials were available to support the teacher's view of his or her own practice.

5. Semi-structured Interviews with Assessment Co-ordinators

This interview was generally subsumed under the Year Two teacher interview because in all the schools the Year Two teacher was also the assessment co-ordinator. This turn of events appears reasonable since the SATs only occurred at Key Stage 1 at the end of Year Two. The Year Two teachers therefore had the most knowledge and training around assessment issues. The assessment co-ordinator's interview was designed to probe the school's understanding of formative assessment and to investigate the practices and assessment policies in place at the school. The Year two teacher was asked to give detail about the reactions of staff to assessment requirements and their opinions about the school's support in developing assessment skills. This information was important in developing the school context and provided more information on the influence of colleagues on the assessment knowledge and practice of the Year One teacher.

6. Year One Teachers -- Unstructured Interviews

Follow-up questions were needed at the end of observed teaching session concerning the children's understanding and knowledge and what the teacher intended to do next. In practice, it was sometimes difficult to get the time to ask the few questions I needed after every session and many had to wait until the end of the day. These interviews also revealed how closely the teacher was working with the curriculum and whether it is used as part of the day-to-day assessment process. Some of the follow-up interviews began with these questions:

- How is _____ doing on this activity, task, etc.?
- What are the problems he/she is having?
- How do you know this?
- What should he/she do next? (I would attempt to find out if this information comes from their knowledge of the curriculum or the

guild knowledge in their head developed through experience or other source.)

Such questions provided the start to many quick end-of-session interviews about many children in the class which I could ask while the children were tidying up or leaving the class. I was also able to check whether the information was used or recorded in any way. I was also able to confirm notes I had made of the data with the teacher. This provides respondent validation of the researcher's interpretation of events and opinions. The interviews also provided a means of comparing what the teacher said and what she actually did in class. The questionnaire, observations and the interview data all contribute to the detailed description of practice. Using a variety of methods to gather information on a single construct improves the convergent validity of the data. Convergent validation implies that "Measures should correlate more highly with other measures of the same concepts using other methods." (H.W. Smith, 1975:291)

7. Other Interviews

Interviews also took place after lessons with teachers and other staff. They also occurred at staff meetings, during lunch or when supervising playtime. Interviews were used to add detail to data, developed consensus on data collected previously, and solicit contextual data concerning the school and assessment.

Questionnaires

One of the questions in the study attempts to find out where and how the teachers in the study developed their assessment practices. The questionnaire and the interview were to indicate what the teacher thinks she or he is doing as regards teacher assessment. The observations and the informal discussion after the sessions were designed to indicate what the teacher actually does in the classroom and whether or not what she learns is used in planning and feedback

to children. It also indicates the skills in assessments they have developed and whether information gleaned is used formatively or summatively.

The pilot study indicated that colleagues might also be a source of experience and skill. As a result, some data on the understanding of teacher assessment by all teachers in that school is important both as an influence on the selected teacher and as an indicator of the school context. But the development of the questionnaire benefited from the pilot study as well. Over the two months, I re-wrote the questionnaire three times with help from the teachers in the school. This was repeated in the early autumn with the help of my supervisor and then piloted with four teachers again before the final version was printed.

The addition of the questionnaire provided some quantitative information which could be used to illuminate findings from case study analysis. It also provided as means of collecting information relevant to establishing the school context with respect to the teachers' understanding and attitude to assessment and the National Curriculum. The questionnaire gathered a great deal of information but did not take up staff time. By including the other teachers on staff in this way, my position as researcher in the school was established and accepted. Throughout my time at the school, teachers, who understood my purpose through answering the questionnaire, volunteered more information during informal meetings at lunch or in their classrooms. Every teacher in the school completed the questionnaire which included items on their use of teacher assessment, its purposes, their own practices and sources of influence. It also questioned their use of the curriculum documents in day-to-day planning, assessing and reporting, (See Appendix 3.4) Results were tabulated by school.

Documents

A wide variety of documents were collected at each school. These were collected in order to provide substantive detail to the description of the school context, and to corroborate data collected from teachers, especially

relating to their planning and recording of assessment information. Review and use of documents can have particular validity problems. Platt warns the document interpretation can be incomplete and biased (Platt: 1981). School records and assessment notes, therefore, were discussed with the teacher, the head or the school secretary in order to confirm the interpretations made by the researcher.

Analysis

Theoretical Description of the Method of Analysis

In case study research, data collection and analysis go hand in hand. Analysis during data collection must take account of the sheer amount of data compiled. Bogdan and Biklen (1982) offer several steps to consider. I have listed the steps and given an explanation of the way this was handled in my analysis. First, the researcher should decide whether the data is going to be used for a detailed description of the setting or directed to generating theory. In this study, the attempt was made to develop a model of formative assessment practice, therefore generating theory was the goal. Secondly, the researcher must re-examine the research questions and re-formulate them in order to focus the research further. The research questions in this study were deemed appropriate. A third suggestion from Bogdan and Biklen notes that previous data collection sessions should be considered when planning for the next session. In this study, memos and follow up questions were included on the daily notes. Included were written comments on the notes and accounts of conversations. "The idea is to stimulate critical thinking about what you see and to become more than a recording machine." (Bogdan and Biklen, 1982: 149) The authors suggest trying out themes on key participants and this was done through on-going discussions with the Year One teacher and sharing notes and ideas. Re-reading the literature during data collection may also stimulate insights. This was done especially in the area of teacher questioning and discourse, change theory, and reflective

teacher thinking. Finally, the authors suggest that the researcher play with analogies and concepts to help see patterns and find relationships between the data. In this study, the process of constant comparison was used to identify relationships and patterns. This process requires further description.

Grounded Theory

The generation of theory guided by the qualitative process is termed grounded theory (Glaser and Strauss, 1967). This kind of theory generation emerges through the process of sorting and categorizing data, at every step developing new categories to fit the data, and looking for irregularities which do not fit the constructions already made. This is called the method of "constant comparison". The categories are named and eventually merged and grouped under themes. Their relationships may also be structured into models or typologies. Data should be collected until there is a "saturation of categories", meaning new data contributes only minute changes to the categories already established. This kind of analysis is an intuitive process, yet at the same time it is systematic because it is directed by the "researcher's overall purpose, the investigator's orientation and knowledge and by the constructs made explicit by the participants in the study." (Goetz and LeCompte, 1984:191) This kind of theory generating has been used widely in case study research, but has been criticised by empiricists who question the validity and reliability of its findings. In response to this criticism, qualitative researchers incorporate a variety of research instruments in order to confirm and corroborate information. Use of multiple research instruments is called triangulation.

Validating Case Study Data

Triangulation may be defined as the "use of two or more methods of data collection in the study of some aspect of human behaviour." (L. Cohen and L. Manion, 1997:233) Reliance on a single method of data collection can lead to

distortion by bias. The use of triangulation has increased the validity of interpretative research. (Glaser and Strauss, 1969) If inferences can be confirmed by the results of a number of contrasting data sources, they are more likely to be faithful representations of that construct. There are at least six types of triangulation available to researchers, including time, space, theoretical triangulation, investigator and methodological triangulation. Methodological triangulation is the type most often employed in educational research. Indeed, in this study, information relevant to explaining the research questions was investigated through several methods both qualitative, including observation, documents, discourse analysis, and interviews, and quantitative through coded and scaled questionnaire responses.

Analysis of Each Case Study Data

Data relating to planning and assessment strategies not involving discourse was collected from documents. This included long and short term planning notes, anecdotal records, portfolio or performance assessment materials, school policies, and written feedback. Such data was also used to confirm the teacher's report about her practice as indicated from the questionnaire and the interview, and to reveal the ways assessment information gathered through teaching and talking might feed forward into planning, thereby illustrating the planning/ teaching/ assessing cycle more completely. Conversely the documents might reveal that the teacher did not make any use of such information, or that she did make use of the information but did not write notes indicating the feeding forward element of formative assessment. General categories from the literature which provided an initial structure to document analysis included:

1. making adaptations to plans
2. anecdotal notes from teaching
3. anecdotal notes from observations

4. written feedback on student work including worksheet, and portfolios
5. use of curriculum materials to develop criteria for instruction

Discourse data was gathered and analysed in a specific way. The first stage of analysis involved sorting the data into initial categories informed by the literature. This was done to describe the type and range of formative assessment strategies practiced by the teacher which are accomplished through talk. During the observation period, discourse which had been audio-taped, was reviewed and transcribed. During transcription, the discourse data was tagged using the HyperQual2 version 1.0 software for Qualitative Analysis and Theory Development (R.Padilla, 1993). The general categories developed from the literature review included the following tags:

- use of children's ideas
- teacher asks how/ why
- specific feedback
- feedback non-specific
- observations of student work
- correction of errors
- negotiate the ways forward- emergent criteria-for work in progress
- whole class feedback
- instructions (use of criteria)
- genuine questions (higher order thinking)
- learning process comments
- modeling methods/ use of exemplars
- praise/ rewards
- behaviour correction- punishment

Data which did not fit into these categories was given a new category. The tagged and sorted data were then reviewed and memos and ideas emerging from the data were added. Patterns and relationships between categories of

discourse and other non-discourse data were then developed. The data in the first case study was analysed at two points, both before and after the second. This was done because the data from the first case yielded many instances of missed opportunities for formative assessment: the range of practice was narrow and the context appeared to work against the development of new teacher skills. The second case study data analysis, however, suggested a wide range of formative strategies, within a classroom and school context conducive to formative practice. At this point it was necessary to go back over the data from the first case study and review the transcripts and data to analyse how the formative assessment opportunity had been missed or left undeveloped. From this analysis, ideas as to how practices might be linked, or integrated into the teacher's planning/ teaching and assessing began to emerge. It was at this point, after the second case study and the re-analysis of case study one material, that a rough draft of a formative assessment model was developed. The model was developed in an attempt to connect the practices and strategies observed in the classroom. A variety of schematic frameworks were investigated to try to illustrate how these strategies might be integrated.

In the third and fourth case study, more discourse and documentary data was sorted into categories already noted and new patterns and categories were continually developed. These latter two case studies were used to refine the model constructed after the first two case studies. Inferences made in the first two case studies were investigated again in the last two schools. Questions emerged which at times required a return to earlier school data for more information. In addition, it also became clear that some categories required data collection from more than one source. In particular, data collected on planning which makes use of emergent criteria was collected through discourse observed in the classroom and by the collection of planning notes.

As the analysis of the case studies continued, new categories or refinements of the categories emerged from the data. These new labels were

developed to reflect the data in the category in a more specific way. In several instances, a return to the recent literature helped to develop an understanding of specific elements of the formative process. For example, discourse relating to feedback was sorted using the Feedback Typology developed by Gipps and Tunstall (1996). The typology represents the findings from research on feedback reflecting a much more extensive data sample than this study of four schools. The research was useful in describing feedback comments in more detail. The typology identifies 19 types of feedback set along a continuum moving from evaluative to descriptive responses to student work. The typology provided illustrative labels for the wide range of feedback data collected. In addition, the literature on questioning and reflective thinking was examined to describe patterns and practices emerging from the case study data.

Analysis across Cross Cases

The Use of the Multi-case Approach to Develop and Revise a Model of Practice

As previously mentioned, the literature review pointed to theories and practices important to formative assessment. The literature has also suggested the influences which might underpin those strategies. After each case study, questions and memos were noted to be investigated in subsequent cases. Refinements were made to the model. "Generating hypotheses requires evidence enough only to establish a suggestion – not an excessive piling up of evidence to establish proof." (Glaser and Strauss, 1967:39-40) The analytic induction process was used to account for discrepancies and dissimilarities in the data (Katz 1983). "The process is one of continual refinement of hypotheses as the researcher finds instances that do not match the original hypothesis. Eventually one evolves a hypothesis that explains all known cases of the phenomenon." (Merriam, 1988:143) The teachers in the first and second case study had very different approaches and worked in dramatically different school contexts. Nevertheless, after the second case study a preliminary model of practice was developed. The

subsequent two cases again featured teachers with very different practices. While difficult to deal with, the data conformed to what is required of multi-case constructions. It is recommended that the research should include groups that “will maximize and minimize both the differences and the similarities of data that bear on the categories being studied. Minimizing the differences early in the study allows for the establishment of categories and properties. But once the basic frame-work has emerged, the investigator should turn to maximizing differences among comparison groups.” (Glaser and Strauss 1967:55) Multi-case sampling was also selected to increase the confidence of the inferences made. A replication strategy (Yin, 1991) strengthens the precision of the result given that if a finding exists in one setting, holds in a comparable situation but does not in a contrasting one, the finding is more likely to be correct.

In the results section of Chapter Seven tables are used to show the differences and similarities between the four case study teachers. The range of practices as revealed in the case studies and the questionnaires are tabled as well. This was done as a means of identifying teachers with a wide range of understanding and practice. When this was done, the investigation returned to the data collected on those teachers. More analysis of their interviews, discourse and questionnaire lead to inferences about their formative practice and the influences shaping their skills.

Analysis of Questionnaires

Coding and Quantitative Results.

The main purpose of the questionnaire was to add data that could be measured or quantified in some way to investigate the research questions. Including another type of research instrument provided information which might confirm or deny ideas suggested by the analysis of data collected through the qualitative instruments of observation, discourse analysis, interviews and document analysis. Questionnaires which include ratings “give a numerical

value to some kind of assessment or judgment.” (Oppenheim, 1992:230) Use of a questionnaire was incorporated so that methodological triangulation could be better achieved. The questionnaire was included to gather more data relating to the research questions. These topics were represented by items designed to:

- investigate teacher understanding and their self- report of current practice of formative assessment
- ascertain what teachers think has most influenced their practice
- describe the assessment context of the case study school and provide a means of comparing the opinions of the case study teacher with others in the school.

This might give further information as to whether the teacher was similar or different from other teachers at the school in understanding and practice. Data was also provided on the question relating to the influence of colleagues on practice.

Oppenheim (1992:261) describes the product of questionnaire analysis. “The final product is likely to consist of a series of tabulations and statistical analyses; these, together with a few illustrative quotations from the raw data, will be turned into a report showing in what ways our findings bear on the hypotheses with which we began.” The questionnaire employed a variety of item types including scaled and rank order and grids. Space was provided for anecdotal comments and explanations which were included to give respondents an opportunity to comment and elaborate on their ratings.

All sections of the questionnaire gathered data directly related to the study’s research questions. (See sample questionnaire in Appendix 3.4.) The questionnaire was designed to gather data from the case study teacher and her colleagues about the formative assessment strategies they feel are important to their practice (Part A), the curriculum or other resource material that helps them carry out assessment in the classroom (Part B) and the sources of influence on their practice. (Part C). Part D required teachers to rank the most important

purpose of assessment. Responses to this section provide data on the teachers' view of the importance or value of assessment activities in their classroom. Items include a range of both summative and formative purposes. The last section of the questionnaire (Part E) probes the teacher's use of Statements of Attainment and the National Curriculum in their assessment work with children.

The questionnaire analysis required very simple scoring and tabulation methods. In Part A, case study teachers rated their most to least important assessment activity from 1 to 5, where 1 was an activity most important to their practice and 5 an activity least important. The first five items related to what might be called formative activities and the last four to summative assessment functions. Scores were tabulated and then inversely scaled so that high scores indicated a strategy of high importance to their practice. For example, if a teacher rated the first five items at 1 or most important, each 1 was coded as a five. A score of 25 out of 25 on the first 5 items indicated that formative strategies were very important to that teacher's practice, according to their own self report. To report whole school context for Part A, the rankings were simply counted up and presented as a raw score and as a percentage. Since there were only 5 - 7 respondents in each school, this method of presentation seemed most appropriate. Part B and C results were reported in tables using the same procedures as Part A. A discussion followed each of the tables for clarification. Furthermore, the responses of the case study teacher are indicated by asterisk. This was included as another source of information on the influence of colleagues on her practice; if her views were very similar to the group, for example, this might suggest that her colleagues have in some way had an influence on her views on assessment. Conversely, if her responses are very different from her colleagues, this might suggest she is less influenced by her fellow teachers at the school.

Part E results probed the use of the National Curriculum. Raw scores were presented in tables. Trends in response were clearly identifiable and

anecdotal comments were included to develop the information more fully. Individual case study school results are given in each case study. However, in Chapter Seven, cross-school tabulations are given to present information on assessment practice and the sources of influence on practice for all the teachers in the four case study schools. All the teachers were from schools in the same LEA, and participated in the same In-service training in assessment by the same trainers. The results are to describe the teachers' understanding and practice of formative assessment in that LEA. This was done in part to describe the school and LEA context, but also to provide information on the influence of In-service training on the teachers, including the Year One teachers who were the principal focus of the case study investigations. These methods constitute the analysis of the data. The next three chapters are devoted to the case study reports.

Chapter Four

D'Arcy Road Primary School

This case study describes the context and practice of the Year One Teacher at D'Arcy Road Primary School. This case was the second setting for data collection. The full report of the first setting, St. Michael's RC Primary, is provided in Appendix A.

At the time of data collection, D'Arcy Road School had 207 pupils enrolled, with 83 children eligible for free-school meals. The catchment area was made up of mixed council flats and owner-occupied houses. The area included divergent ethnic populations from all socio-economic backgrounds. While most pupils were born in England, the school had a large number of pupils who spoke Chinese or Bengali at home. There were eight staff altogether and three part-time teachers. The Year Two teacher, Donald Rendall, was the acting head teacher for the school year. The head teacher had been seconded to a LEA position.

School Context and Assessment

Information on Assessment from the Head teacher interview

The information for this section is taken from the interview with the head teacher. All quoted comments are his. In interview he suggested that the LEA in-service training on assessment had been insufficient to support any change in practice by the teachers at the school. He commented that, "Most INSET (in-service training) was about trying to cope with the documents and understanding what it meant." The teachers had attended some courses on the use of the National Curriculum but the school "didn't change other than statutory requirements." There were too many Statements of Attainment to cover and he felt "vindicated" by the Dearing report which had slimmed down the requirements. The curriculum was not introduced to the teachers before it was announced in the media and this caused initial resentment. Over the past two years, the head teacher had read the curriculum carefully and found it

helpful in many ways. "I could see the need for developing primary practice, especially in science and maths." He also liked the systematic approach to arts, history and literacy, but felt teachers needed a standardised bank of resources to help them implement the curriculum into their planning.

He suspected the curriculum writers were not primary teachers, because of the emphasis on subjects. The curriculum is useful in describing what has to be taught but not really useful because "children don't learn in a continuum." He explained that in his view, some pupils make leaps and some learn by rote first. The Non-statutory guidance was seen as a good idea by the staff but it wasn't written in a "language one could understand."

For assessment, the school staff liked the Primary Learning Record (PLR) better than some of the recording tick sheets that had been published with the NC because of the detail given in the PLR. He commented that "a receiving teacher can't read ticks." The school had developed yearly plans using ATs and a list of Math skills required over the primary years to help monitor progress. This was initiated by the head teacher and written by the year two teacher and the head.

Smith and Andrews (1989) found that effective head teachers were most often engaged with their teachers in four kinds of strategic interactions, including those of a resource provider, instructional resource, communicator and as a visible presence. The D'Arcy Road head teacher did not appear to be an instructional resource on a daily basis because he was very busy teaching half-time and doing the work of the head. He was, however, a very visible presence and came into the year one class at least once every day. He took over the class when the Year One teacher had to go to her science INSET course on Wednesday afternoons. He took the role of a communicator and could be seen as a resource provider through his work on the assessment policy and the yearly planning sheets. In Hall and Hord's terms (1987), this head was an initiator, but one of the effects of the pressures of rapid curriculum change was to make him

"more cautious" he said. Protecting teachers seemed a part of his reaction to changes he was not certain would be beneficial. Fullan (1991) suggests this as an understandable response to changes imposed from outside the school.

School Assessment Policy

The staff of the school had conducted meetings to establish an assessment policy in September 1991. The staff did not write the policy together but they attended the meetings and listened to a discussion of the principles of assessment relating to the new curriculum. The document itself is important because it clarifies the values and understanding of the staff relating to the summative and formative functions of assessment. The document is used as evidence of the staff's thinking about assessment.

Underpinning our assessment practices is an agreement that formative assessment is the daily bread and butter of the good primary teacher. Working with individual children, assessing precisely their level of knowledge and understanding, in order to plan the next experience or activity is the assessment that informs a teacher's daily practice. Summative assessment takes place at set times in order to record, very often for the purpose of reporting to parents, governors or other teachers, a child's attainment at a set time. . . Assessment and planning are inextricably linked. Planning procedures should always take account of the on-going need for assessment. (D'Arcy Rd P. S -- Assessment Policy -See Appendix 4.1)

The document succinctly reveals a confident understanding of the summative/ formative distinction. The emphasis on daily practice is clear. It should be noted that the teacher strategies for conducting formative assessment in the Assessment Policy are described as " Brief observations of individual children that arise out of daily curriculum activities and feed into teachers' planning (formative assessment)." The school had no regular moderation process

with other teachers in the school but the head teacher indicated that this would begin soon.

School Context

Results from Questionnaires

Table 4.1 Results of Teacher Questionnaires (N=5)

Part A- Assessment Practices

Rate each one on a scale of 1 to 5 to show the importance you attach to the activity.

Assessment Practices	Most Imp		3	Least Imp	
	1	2		4	5
Close Observation of a child working	3* (60%)	2 (40)	0	0	0
Questioning during a task to see if a child understands	3* (60)	2 (40)	0	0	0
Questioning at the end of a task to evaluate the success of the lesson	1* (20)	3 (60)	0	1 (20)	0
Questioning at the end of a lesson to reinforce the main concepts	1* (20)	3 (60)	1 (20)	0	0
Giving verbal feedback to a child about the quality of his/her work	5* (100)	0	0	0	0
Giving written feedback marked on the work	0	0	1 (20)	1 (20)	3* (60)
Deciding on levels and recording information about a child's work	0	0	0	4* (80)	1 (20)
Using Sat-type tasks or other standardised tests to support your on-going assessment	0	0	1 (20)	1 (20)	3* (60)

* asterisk denotes Year One teacher's response

Discussion

These results indicate that for this school, teacher assessment practices most typically include verbal feedback, close observation of a child at work and questioning to probe the child's level of understanding and grasp of the lesson. While teachers question at the end of a lesson to evaluate the success of the lesson and the efficacy of their teaching, this was not ranked as most important to their assessment practices. Recording, reporting and using standardised materials appear to be a low assessment priority. This suggests that on-going teacher assessment during class time takes precedence over gathering evidence to validate or indicate achievement for reporting purposes. The first five assessment practices are teacher activities which are associated with formative assessment. The tendency of teachers at this school to rely on these activities suggests that information which could be used formatively is being gathered whether or not it is used effectively for that purpose. At the infant level, written feedback may have been rated very low as an assessment practice initially at the year one and two level because of the pupil's developing skill in reading. However, even at the Year Four level, written feedback is used infrequently by the teacher and was rated as a 4 or least important.

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Table 4.2 Results of Part B-Planning Source Materials. (N=5)

This question attempted to find the sources of the teachers' ideas for planning lessons. Teachers were asked to "Circle the most appropriate number where 1 is very useful and 5 is of little use to your planning."

Sources of Planning	Very Useful			Not Useful	
	1	2	3	4	5
Published work schemes and teacher handbooks	0	3 (60%)	2 (40%)	0	0
Your own records and ideas from observing the child	4 (80%)	1 (20%)	0	0	0
National Curriculum Statements of Attainment	0	1 (20%)	4 (80%)	0	0
National Curriculum Support Material such as SEAC's Pupil's Work Assessed	0	1 (20%)	0	3 (60%)	1 (20%)
LEA or school-produced plans	0	3 (60%)	0	2 (40%)	0

Discussion

These results reveal the major source of planning to be the teachers' own ideas based on observing pupils. Comments from the interview with the year one teacher supported this idea. Working from the interests of the pupils in developing topics was a primary source of ideas. The results also suggest school plans and curriculum statements are used in conjunction with published schemes of work, while National Curriculum support materials are not often used. Teachers suggested that such materials never even get to them in the classroom. Implementation of school-based plans and the use of LEA material appeared to depend on the emphasis placed on such materials by the head

teacher or curriculum co-ordinator in the school.

Table 4.3 Results from Questionnaire Part C --Influences on Teacher's Assessment Practices (N=5)

Sources of Influence ranked 1-6 where 1 is the most important influence on teacher assessment methods and 6 is the least important. Note that some teachers ranked several factors of equal importance.

Ranking by Teachers in the School						
Sources of Influence	1	2	3	4	5	6
Teacher Training	0 0%	0 0%	1 20%	3 60%	0 0%	1 20%
Experience In The Classroom	4 80%	1 20%	0 0%	0 0%	0 0%	0 0%
National Curriculum Requirements	1 20%	1 20%	1 20%	1 20%	1 20%	0 0%
National Curriculum Support Materials on Teacher Assessment	0 0%	1 20%	1 20%	0 20%	1 20%	2 40%
In-Service Training	0 0%	1 20%	3 60%	0 0%	1 20%	0 0%
Ideas ,Resources & Methods Learned From Colleagues at This School or Other Schools	4 80%	1 20%	0 0%	0 0%	0 0%	0 0%

Discussion

The results for this school indicate that experience in the classroom and the ideas, resources and methods learned from colleagues are the most important sources underpinning the development of the teachers' assessment practices in this school. INSET and National Curriculum support materials were ranked lower as sources of influence. The result for the influence of the National Curriculum is unclear from these results. The teachers ranked the curriculum anywhere from 1 or most important to 5. It is important to add that the Year One teacher ranked the curriculum as most important (ranked 1) and the Year Two teacher as very important (2). As the Year Two teacher would be testing at the end of key stage one, the importance of the curriculum makes sense.

Table 4.4

Results on Use of the Curriculum

E. 1. a) Use of Statements of Attainment (N=5) "I use Statements of Attainment to plan my daily lessons."

	Mathematics	English	Science
A Lot	1 *	0	1*
A Little	4	4*	4
Never	0	1	0

*The asterisk denotes the Year One teacher's response.

Discussion

The Year One, Two and Three teachers noted the highest use of the curriculum. Their anecdotal responses supported this result.

"In addition to running records, sampling and end of year reports for each individual child, I now have to complete national curriculum grids to monitor each child's progress (re: ATs). I began teaching as the NC was introduced and thus have not had to revise my teaching methods dramatically.

"The NC documents, programmes of study and assessment examples are now a resource for my planning. My classroom practice and organisation hasn't really been affected, other than in the way the curriculum balance and range has been affected. My record keeping did reflect in Y2 (Year Two) the KS1 (key stage one) SATs, and this was reported to parents on our record summary."

From these comments, it appears that summative aspects of assessment for recording and reporting have been influenced but the curriculum has had less influence on teaching. Only the Year One teacher said she used Statements of Attainment for daily planning. For all the other teachers, statements of attainment were only "a little" useful for planning. This suggests that the year one teacher is not highly influenced by her colleagues in the school.

Table 4.5 E. 1. b) Use of Statements of Attainment (N=5)

"I use Statements of Attainment to decide on a child's achievement."

	Mathematics	English	Science
A Lot	0	0	1
A Little	4*	4*	4*
Never	1	1	0

*The asterisk denotes the Year One teacher's response.

Discussion

These results indicate only a little use of Statements for deciding on achievement with even less use for Maths and English. More use of the curriculum is seen in Science where teacher expertise may not be so well developed. The staff's response was very homogeneous on this item.

Table 4.6 E. 1. c) Use of Statements of Attainment (N=5)

"I use Statements of Attainment to help diagnose a child's strengths and weaknesses."

	Mathematics	English	Science
A Lot	0	0	1
A Little	3	3	2
Never	2*	2*	2*

* The asterisk denotes the Year One teacher's response.

Discussion

Diagnosing strengths and weaknesses in students corresponds to a formative assessment function. The results for this section indicate a low use of Statements of Attainment for this teacher activity. The year one teacher, who revealed a wide range of formative assessment practices, indicated that she never used the curriculum or diagnosing learning difficulties or strengths. This suggests the curriculum has not been influential in developing formative

assessment practices for these teachers.

Table 4.7 E. 3. a) The Influence of the National Curriculum on Teaching

“My teaching methods and class organisation methods have been influenced by the National Curriculum.”

	Mathematics	English	Science
A Lot	0	0	0
A Little	4*	4	4*
Never	1	1*	1

* The asterisk denotes the Year One teacher's response.

Discussion

In this school, only a little change in their practice has been noted by teachers. The head teacher suggested in his interview that part of his function has been to protect teachers from too much change too fast. This slow adaptation is clearly indicated by these results.

Table 4.8 E. 3. b) The Influence of the National Curriculum on Teaching (N=5)

“My recording keeping methods have been influenced by the National Curriculum.”

	Mathematics	English	Science
A Lot	0	0	0
A Little	4*	3*	4*
Never	1	2	1

* The asterisk denotes the Year One teacher's response.

Discussion

As in the other results, only little change in record-keeping has been noted by the teachers, and less so in English.

Teacher Background and Classroom Context

The year one Teacher at the school was Linda Marks. She was 30 years old at the time of data collection and had been teaching for seven years. She had taught at this school for three years. The teacher had been trained in observation techniques and commented that the INSET she had taken on observation strategies was extremely useful to her practice. This teacher had also taken courses in reading development and had taught short courses in early reading skills. During the term of data collection, this teacher was attending a science course. The evidence suggests this teacher consciously works to develop her professional skills.

Daily Routine

It was evident upon entering her classroom, that a principal goal for her class seemed to be that the children become independent of the teacher. The primary helper mentioned this goal several times and the children also mentioned they had to “get to work on their own.” All classroom routines appeared to be built upon this foundation. The early morning routine, printed on small posters around the class, included the directions, *“put down your chair, do your calendar, read a reading book, change your borrow- a- book or finish a project.”* Children were to begin these tasks immediately upon entering the classroom.. One parent noted that the informal atmosphere was perceived by parents including those who spoke little English. Approximately a quarter of the children in the year one class spoke a second language at home (seven pupils out of 30).

The teacher had a primary helper who came into the class every morning. Her work generally consisted of organising materials, especially the art materials. However, she did monitor the work of specific children when asked to do so. The children worked in small groups at tables, at centres or on the carpet. (See classroom design, Appendix 4.2)

Teacher Views on Curriculum and Assessment Issues-Questionnaire and Interview Responses

The responses to the questionnaire and the interview were examined to determine the teacher's understanding of her own practice. This information was useful in the analysis of the teacher's practice and contributed to the observational data collected in the classroom. (See Table 4.1) In Part A of the questionnaire, the teacher rated questioning and close observation of the pupil as her primary assessment activities (1) and rated written feedback and summative recording of information as a very low priority. The eight practices listed in part A of the questionnaire include both formative and summative assessment practices. The first five practices relate to formative assessment and the last four relate to summative practice. Giving verbal feedback to a child about the quality of the pupil's work can be used for both formative and summative assessment purposes. The raw scores were inversely scaled so that a high score indicates a high level of use of these identified assessment practices. Linda Marks scored 30 out of 40 possible points overall. More important is the breakdown of her ratings. In the first five practices relating to formative assessment, she rated them 25 out of 25; in other words, all the practices were of great importance to her work. The last four, or summative practices, she rated 10 out of 20, the only important factor was the verbal feedback. From Part A on the questionnaire then, the teacher indicated that she makes frequent use of formative assessment strategies.

In Part B, the Year One teacher suggested that she used the NC Statements of Attainment a great deal for planning Maths and Science lessons, but less so in Language where she felt she had the greatest expertise. She had done special training in reading and was confident with her methods. In using the Statements of Attainment for planning the teacher noted that she read the documents, "to give myself a clearer understanding of what I'm trying to achieve--i.e., a more precise idea." Her response on the questionnaire supports

this; she said she used the Statements of Attainment for planning a great deal for Maths and Science and less so in English.

She noted that her assessment practices have been influenced by the design of the curriculum. "What I'm looking for [in a child's work] has been affected by my familiarisation of the NC -- i.e., my criteria for assessment is [sic] influenced by the NC." The detail given in the curriculum helped to focus her observations and direct her questioning. Her comment here is important as it directly responds to a central question of this study involving the influence of curriculum on assessment practices. From her comment, it is apparent that the curriculum has drawn her attention to the use of criteria for planning. She indicated that she did not use the curriculum for diagnosing weaknesses and strengths in a child's learning. From these two statements the teacher revealed that her planning and on-going assessment may have been influenced by the curriculum. Further to this, other responses on her questionnaire suggest some degree of curriculum influence. She noted the most important influences on her teacher assessment practice have been her own experience in the classroom, the National Curriculum and ideas from colleagues. These were all ranked number one out of six choices.

On the questionnaire she indicated that her teaching methods had not been influenced in Language or English, the subject she feels very confident in teaching. Her teaching in maths and science have been influenced a little by the curriculum. Her record-keeping has been somewhat influenced by the curriculum in all subject areas. She said she now keeps more samples and refers to them in discussing a pupil's progress with parents or on reports.

In section B of the questionnaire which illustrates the teacher's attitude towards the purposes of assessment, this year one teacher rated diagnosing a child's progress and future needs as the most important purpose of assessment (rated 1). Motivating children was ranked as second in importance and diagnosing the progress of her whole class as third. Interestingly, she did not

identify evaluating the success of her lesson as important at all. Despite this, evidence from observations made of her lessons revealed that she used a variety of questions at the end of work sessions to assess what the children had understood. As will be shown in the discussion of the classroom observations, she also made changes in her tasks, planning and teaching as a result of her assessment. She may have been unaware of her own strategies, or was unaware that such questioning and adaptations can be part of formative assessment practice.

Formative Assessment Practice

The Teacher in Action

The information collected in the questionnaire goes some way to indicate the teacher's understanding of her own practice. The observational data collected in the classroom may or may not confirm her self-report.

Planning

1. Instruction is based upon use of the curriculum outcomes or requirements

This Year One teacher organised her planning in integrated subject topics. For example, the topic for the autumn was circles and spheres. From this topic she was able to plan Maths, Science, Technology, Arts, RE, Art, Phys-ed and History. Language was not listed because it was integrated in all of the activities across subject areas. (See Appendix 4.3) The areas of investigation ranged from electrical circles or circuitry to circles in architecture and the orbits of the planets in the solar system. The Circus topic was used as a literary theme for books as well as circles and spheres found in art from different schools and historical periods. In planning this topic the teacher began with the idea of opposites. She then worked through the NC and saw that she could "cover" a great number of Statements of Attainment with this theme. She looked through other published documents including the BEAM Maths materials which lists ATs and levels and saw that they would fit in as well.

The teacher said that for Science planning, she used her own methods but planned from the curriculum to the activity instead of the other way round as she did for other subjects. “Usually I decide on a topic that will be exciting to the children and then see that they cover as many of the [NC] statements as possible.” For Science she (and other teachers in the school) checked to see that the three Science attainment targets were met more precisely. They tried to devise a topic which would involve these ATs. Linda Marks had no Science training past secondary school and thus felt less confident in science planning. The school required plans to be handed in but they did not need to be matched with ATs in year one. (As previously mentioned, in Maths the school had developed a booklet for each child containing ticklists of achievement for each AT. These were considered to be “useless” by the Year One teacher. (See Appendix 4.4)

2. Information of current student achievement and conceptual understanding is used to feed forward into planning.

The Year One teacher’s planning material took three written forms:

- Whole term planning sheet — legal-sized sheet with subjects along the side. Concepts only were listed here. These were handed in.
- Topic plans for her use --lists concepts, skills, attitudes and resources.
- Her own weekly plan --the weekly plan listed activities, groups, lists of materials to get or prepare and time schedules.

It is important to note that her planning sheets were updated during the week. (See weekly plan Appendix 4.5) This provided evidence that she adapts her planning and teaching based on her assessment of the children’s understanding and progress in their lessons. Use of assessment data in this way can be seen as an attempt to “feed forward” into planning. Planning -Self-evaluation and planning adaptation based on emergent criteria

In interview, the teacher claimed to update her planning “as the need

arises or if activities take more time". Information about her program and its effectiveness is gathered during instruction through her frequent use of discussion sessions at the before or at the end of a work period. The children were divided into mixed ability working groups, for a work period 45 minutes to one hour in length. At the end or sometimes at the beginning before another group started on a task, the children came together on the carpet, or at one of the classroom centres where an activity had taken place. During these sessions the teacher's method of self-evaluation seemed to involve two steps:

1. The teacher asked groups of children to explain to the others what they had been doing and what they had "found out." She listened to this and asked questions about the process and what they understood from what happened. She then appeared to modify the resources at the task table or add information to her instructions to the next group based on what had happened in the first group's experience. The preceding group was kept aware of how the work was developing or reviewed the concepts to be learned through the task at the end of session discussions led by other groups.
2. The teacher observed the children at work and watched for problems in both process and product. Again, she used the problems one group revealed, to change her instructions or materials before the next group tried it. It should be noted that she tried not to tell them any particular answer or concept until they had discovered it in part by themselves. She tried to "leave more clues" she said, again using a child-centred yet socratic approach.

A number of problems were observed with this approach in the context of the busy classroom. A great deal of time was needed for each group to work at a centre. Time was also required for children to finish their work and move to the carpet or the centre to listen to the children talking about their work.

The shift sometimes took up to 10 minutes. Secondly, some children did not seem to listen attentively to these whole class sessions when they were sitting on the carpet or standing around a centre in groups. Many did not appear to benefit from the discussions except when their groups were directly involved. In addition, the use of centres where children are talking to each other, heightened the noise level of the classroom. The teacher and the helper had to be monitoring work constantly so that children were kept on task. When the children returned to the whole class session they had trouble sitting still and changing their learning style from active engagement and talking, to active listening. Some of the Year One pupils found this very difficult and the teacher was required to shout out to the group to be quiet. However, the instructional format where children move to centres and then return to whole class teaching provided opportunities for feedback related to improvement, revealed the emergent criteria, and allowed the teacher to collect information on current understanding through the use of genuine questioning; all strategies important to formative assessment

Science

An example of her practice in this subject area involved a science exploration in making shadows. The following excerpts took place over three consecutive days. On the first day, the teacher asked a group of children to make puppets and then “to try to make eyes that show up on their puppets”. Her instructions were to “make the faces show.” The goal was made clear but the method was not. A light, a screen, and a table of materials had been set up for them to use. The children worked and discussed the problem for 10 minutes. The teacher worked with other children but came by and watched them work twice during the 25-minute period. She did not ask any questions at this first session but observed the difficulties the children were having. At the end of the session, the whole group sat near this table. The teacher directed questions to the group and the class.

T- What makes the shadow? Which bit is it? The light or the dark? (She put her hand in the light)

C- (in example group) The dark.

T- Which bit of the puppet makes it?

C- (three children on carpet) The light - the front bit. It's blocking the light and then the thing is a shadow.

T- It's certainly got something to do with blocking it. If I put something in front of the light, (she picks up a ruler on the table) what's the ruler doing?

C- (more than one) It's making the shadow- It's blocking the light

T- Have you seen shadows before?

C- (many hands and comments)

T- Where--?

C- (one of the group) When the sun shines you get a shadow--on the floor.

T- Why?

C- (from the carpet) The sun is very light and it makes it dark.

T- And the bit where it's dark is there a shadow?

C- Because it's because you're blocking it.

(The teacher had to stop there because of playtime.)

The questioning here is both closed and open-ended. In the beginning the teacher is looking for specific content answers about creating shadows. She wanted to pin down exactly how shadows are created. Her "why" question to one of the pupils near the end of the exchange attempted to uncover more of the reasoning used to understand shadows. The teacher commented that it was obvious to her that the group did not yet understand how shadows worked. She seemed frustrated at the outcome of the session in some way. The teacher used observation and questioning to find out what the children's current understanding and skill might be and to find out whether the task or class activity has developed their understanding.

The next day another group worked on the puppets with the same task. Before working, the teacher reviewed the discussion about blocking the light with this group and had added other materials to the resource table. On this day, some of the materials had holes in them. There was some computer paper, some letter shapes and some scissors. She added these because of the previous day's discussion. She said they "needed more clues" and maybe the work was "a bit hard". This group tried several pieces of material in front of the light. One child tried the computer paper and the dotted holes at the side made a clear shadow pattern. The teacher saw this and had the child explain what happened to the others in the group. They then cut out eyes in the puppets. This group presented to the class again at the end. What follows is an excerpt of that whole class discussion.

C- She cut it out to make a face.

T- It didn't have holes and she hoped that the drawing would show on the shadow and did it?

C- No.

C- I could see it. The picture...

T – No (cut off the previous comment), so the next person cut out some holes to make a face that was—Victoria- but when she put her hand in the lovely holder she made in the back. Did it show? (The teacher had witnessed this.)

C- No.

T- Why not?

C- Because the hands were squeezing the hole.

T- I'm not sure what that word is--you mean it is blocking the holes?

What do we want the holes for?

C- Make the face go up.

C-The light had to go through something to make the thing work.

The teacher could see that though the group had figured out the

method of making shadows they still did not know why it worked. The teacher had summarised and reinforced the process but the conceptual understanding was clearly not there yet. When the child said squeezing the hole, the teacher realised that that they didn't understand that the hand was inside the puppet blocking out the light. This information pinpointed exactly what the children did not understand. The teacher wanted clarification of the understanding so she wanted more explanation. She used the phrase, "I'm not sure what that word is" and then adds the term "blocking" in exchange for "squeezing". The opening phrase "I'm not sure what that word is" admits to the children that the teacher does not understand what they mean, suggesting that their information is genuinely useful to her and that their thinking is valued. This could be an indication of the teacher's attempt to share power with the pupils, although this was a highly structured lesson format. After the teacher gathered the information she added another demonstration to the class to "scaffold" the learning in the zone of proximal development. She went to the puppet centre and demonstrated the process again for the group and the whole class.

T- (turns on the light in front of the screen) Right-

Nothing in front of the screen at the moment is there?

C- (several children) NO.

T- You can see all of the screen is nice and bright and light. (Puts the puppet on her hand in front of the light.) When I put my hand in that holder the holes are blocked. My hand is blocking them. So what do I do next?...

The teacher had modified her planning by adding to the materials and adding explanations. She noted these changes in her daily plan, indicating that more time would be needed in whole class explanation and small group work. Her questions and observations allowed her to learn from each group's experience with the task. The teacher recognised that the first group didn't achieve the goal but that they "had a try" and learned the concept from the class examples and discussion as well as from their own experience with the task. In

many cases she gave time for extra work so that all children completed the task. In this case she had several groups work on puppets at various times. Her assessment was that they still did not really understand the concept and needed to experiment and make shadows repeatedly and in different ways. She appeared frustrated at times with this task especially at the amount of theory that had to be added to the experience. She had hoped the concept would become evident in the process. This frustration reinforces the conclusion that this teacher believed in the child-centred approach where pupils discover concepts on their own with guidance. She seemed to be uncomfortable with the fact that they needed so much scaffolding of their thinking. The teacher also acknowledged the pressure of time. She was determined to continue teaching in the way she thought best for the children but this was done at the cost of not covering everything on the curriculum. This feeling reflects the findings of the study of Key Stage One, 1991 conducted by Pollard, Broadfoot, Croll, Oborn and Abbott (1994:156). They found the feeling of pressure universal amongst the teachers they interviewed and a sense of loss of the close affective ties many teachers had developed with the children in their class. This was intensified if the teacher felt a strong conflict between the demands of the National Curriculum and the needs of the children. The teacher used this method of group trial, group explanation with teacher input, use of student exemplars and subsequent trials by other groups in maths, language, art as well as science during the data collection period.

Teaching

Information of current student achievement and conceptual understanding used to feed forward into planning and teaching--Use Tasks, Questioning and Observation

This teacher carried out three practices intended to collect information on pupil understanding.

1. Initiating group discussion was a strategy used frequently to provide them with insight into children's ideas. She used open-ended process questions to probe understanding. She asked the children to explain what they had encountered in a task to the whole class and she used the children's ideas for problem-solving.

Example:

The children had been creating number lines and using unifix to count backwards from 50 as a whole class exercise while taking attendance. The teacher asked how many were in class and how many were away. At the front she used a big number line to count back three absentees from thirty.

T- You can also use unifix for this.
You can build up a tower.

How about we count in twos. I find threes rather difficult. 2,4,6,8--(she continues building the tower) Now there's a tower with one unifix for every child on our register. Let's count in ones to check. (They count) How many people aren't here?

C- three

T- Who are they? Samuel, Patrick and Anthony. So how many are we left with.

What do I do now?

I don't want the answer. I want you to tell me how to find out the answer.

C- Count them ones and then go backwards.

T- Right, but I don't want to use the number line.

C- No, I mean put them back--taking the unifix away you count back

T- Oh, I see 29, 28, 27--That's clever. Is there an easier one?

C- Can't I just count the tower?

T- Yes, I started with 30, I took 3 away. Now I want to count them...

The teacher physically models the building of the tower to demonstrate and cue the pupil to the process.

Use of the collegial "we" indicates that she is included in the problem solving task. Barnes and Todd (1977) classified such conversation at the social and cognitive level. The teacher's initiation suggests a method for answering the question. Identifying her own weaknesses can be understood as a means of indicating her role as a learner rather than a leader only. It may also articulates what Barnes and Todd call a "reflexivity" to the talk where she is explicit about her own thinking about how to proceed. This includes counting by two's because it is easier for her, and checking by counting by ones. There is a sharing of power implicit in this. Later she elicits alternative viewpoints on the process, by accepting and trying out the children's suggestions. Asks for help in the process.

Could be considered a

Meta-cognitive statement. Communicates that articulating the thinking process is more important than the right answer. This directs the children's thinking away from right/wrong criteria for achievement. Children offer two suggestions. Teacher does not make a follow up move with an evaluating comment. Instead, she refines the task with "I don't want to use a number line" This extends the response and elicits another response/method from the pupil. The pupil appears free to explain to the teacher that she has not understood. The child re-phrases the explanation. Teacher gives praise although she is seeking another process. Another child suggests a simpler method. This is accepted by the teacher. However, the other methods were not condemned as wrong, merely not as easy.

Teaching is integrated with assessing understanding in this example. The phrase “I want you to tell me how” supports this. Comments such as these were sorted under a “ask how/ why ” category, and it was evident Linda Marks used this phrase in all subject areas. A limiting factor here is that when questioning in this group setting, however, the teacher learns only about the children who responded. The understanding of those who are not chosen or do not volunteer remains unknown. The teacher, however, questioned in the same way with groups of two as well.

Another example was drawn from a situation where two children were working together. Linda watched them complete their number lines with their own system of recording before she asked them a question.

T- How do you know 25 is wrong?

C- It's not a circle.

C- Because there's a pattern and the one before's a circle.

T- That's the way to do it—good

The teacher again was asking a question to probe understanding. The children both offered explanations which together formed an explanation of their thinking.

2. The teacher collected samples or recorded ideas from conversations she had with children to use in teaching and for the end of term reporting.

Pupil work was put in a sample folder. This was sometimes shown and discussed with parents when they came in with children in the morning. However, other than communicating with parents, the sample folder was used primarily for reporting. Observational notes were put in a separate binder under the name of each pupil and used for reporting as well. This information was not communicated to the children at all times. The formative function of portfolio collection was not well- developed.

3. Formal observations of students during work

Over the period of a two weeks to a month, the teacher tried to

observe children without interacting with them. She said she often writes notes on “how the children work.” This is to give herself feedback on her planning and about the “child’s work habits.” She said this only works because she has “stressed independence” when they are working. The teacher sat beside a group of four pupils while they were working on a writing project. She divided a page into four sections and wrote their names in the sections. The teacher sat beside the group table and watched them work and wrote down what she saw. She did not speak with the children at first although she had to tell other groups to quiet down and get to work twice. She wrote down several points about one child. Another was doing maths so she asked him to get out something to write. If a child looked at the teacher during the observation she looked down and wrote or looked at another child’s work. She said later that this was to “reduce the pressure” on the observed child. She then told one boy to “put more clues in his writing”. This is a phrase she used repeatedly throughout all reading and writing activities. It meant to include the correct beginning sound of the word, spaces between words, correct sound blends where possible, correct ending sound, punctuation if possible and so on. One child asked her in a whisper what she was writing about. The teacher just nodded and smiled and indicated the group’s writing papers. She then asked another child to read aloud from his story writing. Another boy put up his hand but she ignored him. She looked at the writing. Although she said she usually just watched, this day she asked a few questions.

T- Is this a story?

C- Yes—it’s my story.

T- What happens in the end?

C- (child says nothing)

T- Is it a story? Or are you just thinking about things?

C- Yeh.

The teacher said later that she wanted to know if the child understood what a story was, including a beginning, middle and end. The criteria for this question reflect AT 3 on Writing Level 2b and c, where children show they understand and can use the rudiments of story structure. For her class, knowing how to do this is part of what the teacher called “proper writing”. She defined this to the children more than once and gave some detail of the criteria involved.

Teaching encompasses all discourse used to communicate an understanding of the criteria specific to learning. Formative assessment strategies in teaching make particular use of questioning techniques, expert or student exemplars, modeling and guided practice to convey this criteria.

Language

The teacher communicated the criteria relating to the process or strategies her pupils should apply to working. In the language area, for example, whole class lessons on reading and writing relied upon her explanation of strategies and modeling. This teaching method may be called an initiation into process. During the observation period the instruction included:

1. Modeling the story writing process by writing together on large paper at the front. (Visual modeling.)
2. Modeling letter formation on paper and in the air. (physical modeling)
3. Reading together looking for “Clues” i.e., first and last sounds of words, sound patterns, length and shape of words, rhyming words, memorised words and punctuation marks.
4. Repeating the criteria for success before, during and after the lesson both individually to the whole group.

An example of this process was observed one day before the teacher conducted a formal observation session. She first explained what she was looking for in their writing. The criteria were explicit and the children appeared to know it well.

T- I'll be looking for spaces between the words, clues at the beginning and at the end of a word. What else will I be looking for?

C - Our sound patterns?

T - Right--and what else will I be looking for?

C - Proper writing.

T - Yes--and what's proper writing?

C - You can hear them quietly saying them--the letters.

T - Say the letters.

C - You can see them...

T - What's proper writing?--When you know what it says--I hear you reading out your work. I'm going to do some watching of your writing and I'll tell you what I learn at the end.

The children were very familiar with this phrase "proper writing". Writing and reading both appeared to be part of proper writing because the process involves reading the work out aloud after they have written it down. The criteria for proper writing were often repeated in class and the children knew them, but they revealed widely variable stages of achievement. Some children who could say what proper writing was had long streams of letters and spaces put in randomly and then told an impromptu story about them. Others were putting in spaces, clues and punctuation and could read their work aloud. In analysing the criteria inherent in academic subjects, Sadler (1983: 69-70) describes four types of criteria related to learning in a subject discipline. These include regulative, logical, prescriptive and constitutive criteria. Regulative criteria refers to the rules governing uniformity of presentation and organisation in a subject including such concerns as spelling, structure, rules of grammar and other aspects of work which can be governed by arbitrary rules and decisions. Assessing regulative criteria is a straightforward process where a performance can be evaluated as correct or incorrect. Logical criteria have to do with "valid

chains of reasoning". This criteria can be applied across subject disciplines and employs systems of thinking processes whereby equations can be solved, theories proved and conclusions can be reached. Logical criteria can be used to evaluate work as either correct or incorrect. Prescriptive criteria are used in evaluating quality especially in the arts or humanities. It employs more abstract concepts when making judgments such as coherence and originality. It uses qualitative descriptions of work rather than empirical processes to make judgements. For this reasons criteria are applied to a single piece of work or performance. "A prescriptive criterion may be useful in recognizing instances, but it cannot be used to generated them." Constitutive criteria define the characteristics of a subject discipline including the methodologies used by the practitioners and the key concepts and cognitive processes which govern the subject.

When this teacher articulated what is meant by "proper writing", her explanation directs the pupils to regulative criteria to be sure, but perhaps also the constitutive criteria. Regulative criteria is given when the teacher listed in part, the rules or correct form required by writing such as putting in spaces between words. The empirical facts of performance seen in the writing can be judged. But the teacher is also introducing the constitutive processes underlying writing as it is interrelated with reading. Letters take on meaning to you only as you can use them for reading. The teacher was directing the pupils to the processes of literacy as well as its formal structure.

T - What's proper writing?

C - Reading your writing

T - Yes, that's how I know you're reading--from time to time or even seeing you saying the words, as you go along. Then I know your thinking about it and not just putting the letters down with spaces in between and then at the end making up the story. Proper writing is when you know what it says as you're going along.

A further example of her use of constitutive criteria was observed in a maths lesson. The teacher asked for ideas on how they could record their findings. She then used these children's methods for recording data. In each of the four groups, a child suggested a type of recording method which the teacher used for that group. Later, she admitted that sometimes their methods were not what she would have suggested and were in fact rather difficult to use because they involved sharing pens or other resources which took up time. She felt, nevertheless that it was important for them to think and use their own methods of recording data. While she said she did this to make them independent of the teacher, she is at the same time initiating them into the processes used in maths and science.

T-Has he managed to do it? Can we make this on the number line?

Numbers that do make two equal towers on the number line and those that won't.

C- The numbers that do, we can circle and the ones that won't we can fill in.

T-Shall we use that system that he's just invented? Now could you work on numbers 1-10. Number 1 uses a unifix and 2 and so on. See if you can find out and use BJ's system. If you forget you can ask BJ again.

Another example came from a second small working group. The inventor of the system was asked to explain how the recording method might work. The children were given opportunities to explain processes to the teacher and the other children.

T- I want us to find a way of marking down which numbers will make two towers of the same height and the numbers that won't make two towers of the same height.

C- We could circle the numbers and put an X on those that can't.

T- (Repeats instructions) How would that work?

C- You see this number line you find- you know that 10 and another number like 10 put a circle round it. So ten has done that so you put a circle round. The numbers like 3 you need another colour - Where's the three (takes a black pen and puts an x on the 3 and 9) You put a cross but you need another colour for the crosses.

T- Very well explained.

In a further Maths example, Linda's feedback referred to the constitutive criteria of the subject. The teacher told them to guess or predict which numbers would make two equal towers based on what they knew about the numbers and the pattern they saw on their number lines. The teacher mentioned that she had learned about adding the predictive step from the science curriculum and from published work schemes.

C- These make the same height.

T- and what number are you working with?

C-10

T- Right- now write it down. Don't forget to have a guess first (She did not make this very clear in this first group. When she sees them getting on well she leaves them)

In the next excerpt the teacher combined modeling, use of an exemplar, the explanation of the process of investigation with another "ask how" question.

T-What about 20? Can you guess the answer? (she models it with the unifix again.) How many will be in each tower. No one answers until she has a tower of 10)

C- 10

T- You're right Samuel. How did you know? They're right. Does it make 2

towers?

C- (no answer)

T- could we test the other ones?

C- yes ... no

T- Why?

C- I don't want to.

T- I'm not asking you if you want to. I'm asking could we do it?

C-yes.

Here, the answer may not be what she expected but she has learned something of the pupil at the same time.

Assessing

1. Use of Feedback

The transcripts were analysed to isolate the specific kinds of feedback used by the teacher. All feedback comments whether written or verbal (in year one the feedback was almost always verbal) were entered into the data base. As in Case Study one, the Gipps/ Tunstall feedback typology was used for initial categories. Feedback which specifies attainment, helps to articulate the criteria for achievement and constructs the way forward with the learner are functions of feedback most closely associated with effective formative assessment. Examples and descriptions of these forms of feedback are examined in here.

Type C Feedback- Specifying Attainment

Examples for this type of feedback were collected from observations from group individual session.

Language

In this example the teacher reviewed the criteria for writing with the whole class.

T-That's to do with putting the clues in. Some children aren't doing much of that but they'll be getting better at that. That's okay. What's that other thing I might see or hear you doing that will tell me you're doing proper writing and not just pretending.

C- Reading out.

In another example the teacher used a child's work as a model.

T- Put your writing down in front of you. That looks very nice writing Julia. Can you read it out?

C- (she reads a story about staying with her cousin at the weekend. The teacher interrupts her.)

T- I hear the ing pattern -Read the whole message about going to her cousin

C- (child reads the rest)

T- That was fantastic! Where does she live?

C- In Pimlico I think.

T-Just look at the writing- Look at those lovely spaces. Do you know what I'm most excited about is all those patterns. Quite often ing- here- should go with the rest of the word. I don't think it's ever on it's own. And she's got the ou pattern.

In this example, the teacher illustrated the good points in the girl's writing and corrected the weak points.

Type C- Specifying improvement

Maths

At the end of each math group session the teacher went around to correct individually.

What follows are some sample comments:

-After checking one pair- T- You got into a bit of a muddle. Do you want a new number line?

T-Check that 7 again before you copy it out. Now does it work?

C-no

T- then change your pattern.

C- I need a tissue to change it.

(Teacher stayed longer with this group.) Just copy what you've done and you can finish another time. Victoria- your job is to check each one.

(She goes to one pair)

T-What number are you trying out?

C- 10

T- Right then take out 10 unifix and show Sam because you are working with him. Sit down please.

Teacher observes without talking. She sees some filling in the number line before trying them out.

T-You ought to try out all the numbers. Start with 0- no unifix. Then what?

This feedback indicated whether the children had done the work correctly but also whether they had completed the task using the correct process i.e. working with their partner and adding a checking-up phase to their work. Again, it was apparent that using the correct process was of equal importance to the teacher as the correct answer. In summing up one lesson, the teacher used one child's number line to explain the process again.

T-Joe's had a guess and put a circle around 2- He had a guess first-didn't you-didn't he? So have a guess then try it out.

Type C feedback accounted for the largest data sample, however, many examples contained elements of type D feedback as well and they were cross-referenced.

Type D- Constructing Achievement

This type of feedback makes primary use of language in articulating the child understanding and achievement. The discourse is descriptive and uses the child's work as a model. In this example the teacher instructed through modeling the process, gave specific acknowledgement that the result was correct and also involved the child in the demonstration of the idea. Guided practice and praise was also given, making this an example of both type C and D feedback. The exchange took place in a small group setting of 5 children. They were working on the two towers task given to teach odd and even numbers.

T- I'd like to hear Tula

She couldn't make 2 even towers but made 3 of 3. You've made 3 towers of 3.

How many did I want? 2- do you think it's possible?

C (Tula--still doesn't get it) It might be possible. (She tries it again while teacher watches.)

C- no

T-right- you need to break them all up to start again.

C-(takes them all apart slowly)

T- Show us what two towers look like. Just show me what two towers look like.

What happens when you try to make 9 unifix into two towers. What happens?

C- One is too big.

T- Right one is bigger- so it's not possible to make 9 into two equal towers. Ok

Let's try it with 3. Do you think it's possible?

C- No definitely isn't

(children are divided as to the answer. She stops to quieten group)

C- You need another one

T- Right- you show us two towers of the same height.

(stops to quieten group again.) Get on- I told you what to do when I'd finished.

T-Who would like to show me what this would look like when you make two towers?

C-One lower one high than the other.

T-Good girl- one lower one higher- not possible to make them the same height.

A Maths example came from a child in the process of doing the task. The teacher used her questions to lead the child through the task and the concept. The child hesitantly articulated the answer which was then explained again by the teacher. This was the same process used by the teacher in the science lesson. The child added their experience of the task and in the telling, communicated their understanding and achievement to the teacher. In this way the teacher's questions teased out pupil thinking, or even created it, and revealed understanding and achievement criteria to the teacher and the learner.

T- What did you notice happening on the number line. You're not looking at it.

What do you notice? (Repeats this twice)

C- There's a pattern

T- How does the pattern work?

C-will won't will won't (girl points to number line as she answers)

T- But now that I've told you about the odd and even words how would you call it?

C-Odd, even, odd

T- The number 12- what is it?

C- even

T- that's it-

One type of feedback not observed was the use of a child's previous work as a means of comparing present and past achievement. This type of dialogue requires the learner to identify specific features where improvement is required. Portfolios, considered a source of material upon which to base such discussions, were not used during the observation period except as a place to put finished work. Some children had only one or two pieces in the portfolio. The pupils did, however, have several other folders for their work. The use of the portfolio was, it seemed, restricted to summative assessments for reporting.

In relation to assessment, the teacher also collected and recorded information on current achievement and conceptual understanding. It was not always used for feedback directly to the children.

Language

During the observation period, the teacher wrote anecdotal notes (see Appendix 4.6) and then transferred these comments to a notebook. The teacher gave some feedback to the children during these observation periods but did not tell them everything she wrote down. The feedback given to the children has been underlined in these examples of her observational anecdotal notes.

Sam- Joke [book]- loads of phonics! struggled with me helping him through.

Seth- not saying words out loud as he writes

- pointing to word but each reps a syllable- 1:1 not accurate

- going back and reading from beginning although not saying words-
- seems to be reading in head (Confirmed this when he read to me)
- holding pencil awkwardly
- difficult to see any spaces- not using finger to help.

BJ

- saying words and accentuating same letter -formation is not conventional. e.g., cl:g

Sundeeep

- mouthing words as he writes
- seems to be keeping track of what he's writing
- reading himself from beginning once he's got near end (when reminded)
- 1:1 not accurate- when re-reads- appears to self correct and put extra wd in.

Leigh

- putting letters in reverse order i.e., 'r' first then 'f'
- looking right down the page after a while for spacing.

Her notes from reading sessions were brief but contained details useful for formative purposes. Her notes focus on the processes the child has used, what skills have been achieved or not and what strategies were used in the session. Below are several other anecdotal comments.

L. Wo- The Hungry Giant- Brilliant! has been practising- excellent 1:1 using 1st letters as well

Victoria -'hesitant- not v. effective use of phonics

Craig 7/8.1 read. He bear, She Bear- read quite well from memory- we chose a less confusing text for next bk.!!- talked about his anxiety.

Tula - Jamaica Tag along- believes she can read it. Hippopotamus- recognised

this word talking about Sandy

Henry - 1st pages of Cat & Canary - doing v. well particularly if I read simultaneously with him.

The teacher appeared to listen and learn from the observation experience but it was unclear how the notes were to be used. She explained to the researcher that she would use the information to add detail to her lessons about reading and writing. She said she got a clearer picture about what the children know and can do. But while the teacher gave some specific feedback to the children, she did not enter into a dialogue with them about their work at that time. She said she talks with them at other times but not during observation sessions. The notes were dated and put into a binder. Since she did not break up the notes into folders or portfolios for separate pupils, the detail of the observation had to be kept in the teacher's memory only, if it were to be used for remediation or specific feedback at another time. The opportunity to use the observations for immediate and specific "scaffolding" or support was not maximised by the teacher's view that *silent* observation periods were important. Her training in observation and note-making was evident in the fact that she looked at the work with some precision and made sure her assumptions are supported as in the example, *"Going back and reading from beginning although not saying words- seems to be reading in head (confirmed this when he read to me.)"*

The teacher's practice suggests she falls within the category of a Systematic Planner as developed by McCallum et al. (1992) The teacher at times appeared to be a "integrated assessor", meaning she concentrated on assessing, through questioning, observation or performance assessment task, for the purposes of diagnosing and planning. The teacher's aide was used to keep other children at work during these assessments and the teacher did not respond when asked questions by other pupils during this period. The observations were not tied directly to feedback in any immediate way. Ironically, it seems that her observation training which taught her to observe silently, was helpful in teaching

her how to see more detail in a child's work, but at the same time prevented her from communicating her knowledge to the child.

Conclusions to D'Arcy Road Case Study

Sources of Influence on Teachers' Formative Assessment Skills

A summary of the findings in this case study in response to the research question focussing on sources of influence on formative practice is outlined below.

1. The Year One teacher revealed a wide range of formative assessment practices but indicated that she never used the curriculum for diagnosing learning difficulties or strengths.
2. The data from the questionnaires suggested that summative aspects of assessment for recording and reporting have been influenced by the curriculum, but the NC has had less influence on teaching. Only the year one teacher said she used Statements of Attainment for daily planning. For all the other teachers, statements of attainment were only "a little" useful for planning. The year one teacher noted that her assessment practices have been influenced by the design of the curriculum. "What I'm looking for [in a child's work] has been affected by my familiarisation of the NC--i.e., my criteria for assessment is influenced by the NC."
3. For the Year One teacher, the detail given in the curriculum helped "to focus her observations and direct her questioning". Her comment here is important as it directly responds to a central question of this study involving the influence of curriculum on assessment practices. From her comment, it is apparent that the curriculum has drawn her attention to the use of criteria for planning. However it has been also mentioned that she did not use the curriculum for diagnosing weaknesses and strengths in a child's learning. From these two statements the teacher revealed that her

planning and some of her on-going assessment have been influenced by the curriculum.

4. Because her practice and responses often differed from the other teachers in this school it seemed apparent that the Year One teacher has not been highly influenced by her colleagues in the school. However, the results for this school indicate that experience in the classroom and the ideas, resources and methods learned from colleagues are the two most important sources underpinning the development of the teachers' assessment practices in this school.
5. In-service training (INSET) and National Curriculum support materials were ranked lower as sources of influence on formative assessment practices. The result of the influence of the National Curriculum is unclear from the results of this school.
6. The head teacher could be described as an initiator, but one of the effects of the pressures of rapid curriculum change was to make him "more cautious" he said. In this school, only a little change in their practice has been noted by teachers or the head teacher. The head teacher suggested in his interview that part of his function has been to protect teachers from too much change too fast. This slow adaptation is clearly indicated by the results.
7. As in the other results, only little change in record-keeping has been noted by the teachers, and less so in English.

Summary of Teacher's Practice

Planning

The teacher used curriculum resources to plan units and topics. A whole school format has been implemented and long term plans were handed in to be checked by the head teacher. Through this process, the teacher has been required to read and include ATs and specific Statements of Attainment for long range planning. Long range plans were changed most often to provide more depth on an area rather than to cover the whole curriculum. There were no references to the National Curriculum in the teacher's daily Plans. However, the teacher did plan and assess based on curriculum requirements and on her daily plans based on student needs.

When weekly or plans were changed then, the changes were based on "emergent criteria" or what occurred in class. The teacher's notes indicated constant changes of plan including the need more time, resources and remediation. This suggests that the teacher uses information about pupil learning to feed forward into planning.

Teaching

The teacher's use of discourse included talk to demonstrate criteria specific to learning.

The teacher demonstrated, explained and reinforced specific criteria for achievement. In open-ended tasks, pupils were involved in the development of criteria for achievement especially relating to learning processes. These processes included predicting, developing strategies, checking results, and trying alternate strategies. Reflexivity (Barnes and Todd, 1977:156) was noted in the teacher's talk whereby the teacher's own thinking and methods for approaching a problem or task were made explicit to the learners. The approaches of the learners were also validated by this kind of metacognitive discourse. One

possible effect of this form of dialogue was to share the power over learning with the children. There were a variety of question types observed in this teacher's practice including questioning directed at metacognitive understanding. A child-centred constructivist approach directed the teacher's thinking about learning.

In science, art and language she used pupil or other kinds of exemplars to deliver feedback identifying specific achievement and to mutually negotiate the way forward. She would repeat a demonstration or model an method if it was necessary.

The teacher made use of adaptive strategies based on her teaching and assessing.

She used whole group teaching to review information and to learn about current learner understanding. Use of group work sessions occurring consecutively allowed her to "improve" her explanations, instructions, choice of materials or tasks in order to scaffold learning more efficiently.

Assessing

1. Assessment included the use of portfolios and pupil work samples but not for formative purposes. The teacher collected samples of work for folders and portfolios. However, she did not reveal any details of her tracking or observation notes to her pupils, or discuss or make the portfolio selections with a pupil. She used these collections summatively for discussions with parents and for report writing.
2. Feedback was given to learners, especially feedback for improvement and achievement. This year one teacher's feedback was in many instances connected to learning. She did not use tests of any kind or give written feedback. She used daily assessment tick lists to indicate who had completed a task or worked at a centre. If a number of children did not finish a task, she formed a new group to give pupils more time and more explanation. In this way, some lessons were individualised. It was also noted that achievement

and improvement feedback in this case study took place most often in whole class sessions at the end of sessions, rather than individually during work. A child's work was analysed, and discussed with the whole class involved. Individual feedback discussions were briefer and directed to correction and completion of the task. The Gipps and Tunstall (1995) typology describes feedback more specifically. One form of feedback relates to constructing the way forward. It is characterised by feedback which involves:

- a) Articulating relevance of future development
- b) Specifying standards and articulating standards as they emerge in children's work.
- c) Involving children in evaluating standards
- d) Prompting and supporting children in examining their work.

Important or salient features of task were articulated by the teacher at whole group discussions at the end of work times, drawing together a number of criteria at the same time. Possibly she used whole class lessons to give emphasis to criteria, strategies and evaluation processes in a way that the largest number of learners could benefit from them. The strategy may also reflect the time pressures felt by the teacher. The teacher used group work daily and had three different activities happening at the same time. Maintaining the focus and on-task time during group sessions was managed by the movement of the teacher and aide around the class.

3. The teacher used anecdotal notes for tracking reading development. The teacher kept a binder of these notes and other notes indicating work habits. She also used tick lists to indicate coverage of topics. Her daily planning notes were outlined before the class but were added to during the course of the day. These anecdotal notes suggested ideas for the next lesson or changes she had made to the lesson. In this way, some evidence indicated that

assessment included information about learning and about her teaching. The teacher reflected on the efficacy of her work and made changes she thought might be necessary to make the concepts of the work more accessible. She called this “giving more clues”. Clues was a word often used in her lessons as well.

4. Questioning strategies emerge as a more important formative tool than had been previously noted. In attempting to develop a working model of formative assessment strategies, teacher questioning had already been placed in both the teaching and the assessing phase due to its value for both purposes. In this case study metacognitive questions can develop pupil thinking, or even cause it to occur. The questioning process is also obviously audible to everyone and therefore meanings can be made more explicit to the learner. The dialogue can show understanding and articulate achievement criteria to the teacher and the learner. Torrance and Pryor (1998) have also commented that if the initiating- response-evaluate/ feedback (IRE/ F) sequence of discourse is completed with a question instead of an evaluating comment , the discourse is extended perhaps beyond the teacher’s plans for that lesson. To allow discourse to open up in this manner requires the teacher to give up or share power in exchange for extended learning. Building question upon question can lead to conclusions not expected, but the result can be a form of validation for the pupil’s thinking. Further to this, if the teacher is thinking of questions instead of focussing on answers, he or she must be actively engaged in thinking about what the pupils need to know, in what sequence and to what purpose. The pursuit of the right question requires reflective thinking on the part of the teacher. Data on questioning and its function in integrating teaching and planning will be incorporated in the analysis of the next chapter.

Reflective Thinking in the Formative Assessment Process

Questioning to scaffold learning and to gather assessment information used to modify planning and teaching emerged as important strategy used by this teacher. More specifically, questions which require the learner to articulate processes and problem-solving strategies gave her the most useful information. The clearest evidence of adaptive strategies based on teaching and assessing was found in the teacher's instruction of maths and science. This seemed surprising given that the teacher said her expertise was primarily in reading and language. But the discourse and observation data indicated that she questioned her instruction, and the materials she had chosen most obviously when she did not know the area of learning well. In other words, she was most reflective about her practice when she was unsure of her own knowledge. A review of the literature on reflective practice shed some light on the findings here. In *The Reflective Practitioner*, Schon (1983:60) examines what is meant by "practice" in order to understand the actions and thinking beneath it. He suggests that word "practice" is ambiguous because it could imply "a repetitive or experimental activity" to increase one's proficiency, such as in playing the piano. A second meaning of the term relates to the strategies and actions used by a professional to deal with a specific range of situations and clients. Professional practice also contains repetition, in that the professional uses the same skills again and again with different clients. However, Schon explains that,

A professional practitioner is a specialist who encounters certain types of situations again and again. This is suggested by the way in which professionals use the word "case – or project, account, commission, or deal, depending on the profession. All such terms denote the units which make up a practice, and they denote types of family-resembling examples... He develops a repertoire of expectations, images and techniques. He learns what to look for and how to respond to what he finds." (Schon. 1983:60)

This definition applies to the professional practice of teachers very well. Teachers develop a range of skills and knowledge that become “tacit knowing”. Schon (1983:52) suggests that “in this process, which is essential to the acquisition of a skill, the feelings of which we are initially aware become internalized in our tacit knowing.” This contributes to two ways of acting led by “Knowing-in-action” and/or “Reflecting -in-action”.

Knowing- in- action

Knowing-in-action are actions, recognitions, and judgements which are carried out spontaneously, almost without thinking, and without thinking about them prior to performance. Often it is difficult to describe or articulate the procedures necessary to the accomplish the action. One may or may not have been previously aware of the understandings and procedures directing the actions, but in any case, this knowing has become tacit or internalized.

Reflecting-in-action

For some actions, the practitioner has to think about what is happening more explicitly. To do so requires the practitioner to notice what is going on in a situation, and modify the practice to repeat the right way, and reject the wrong ways of acting. Reflecting on patterns of actions can take place during or after performance.

Schon makes the point that as long as a professional’s practice is stable, in the sense that it brings him the same types of cases, he becomes less and less subject to surprise. More and more of the practice becomes part of tacit knowing and to some extent, unarticulated. It has been noted that Sadler (1989) calls this “guild knowledge”. The difficulty with knowing-in-action is that the practitioner may “miss important opportunities to think about what he is doing.” This is termed “over-learning” and Schon strongly suggests that a practitioner's reflection can serve as a corrective to over-learning.

Though reflection he can surface and criticize the tacit

understandings that have grown up around the repetitive experiences of a specialized practice, and can make new sense of the situations of uncertainty or uniqueness which he may allow himself to experience.

Schon (1983:61)

In this case study, self-monitoring was evident throughout the teacher's practice but was most evident in Science. Notably, she was taking a Science course every week to improve her understanding and teaching skills in this area. It could be that this teacher had not developed "tacit knowing" about her science and maths practice and therefore noticed the learning responses acutely. Her reflections on her teaching made use of formative information and directed her planning and subsequent instruction. Although the science curriculum was new and different to the Year One teacher from the first case study (See Appendix- St. Michael's RC school) she did not become more reflective or more formative in her assessment. Instead, the St. Michael teacher seemed to react to her lack of experience in science by asking very closed content questions in a group session tightly controlled by the teacher. The D'Arcy Road Year One teacher had already developed a shared notion of power with her pupils which she did not change despite the fact that she was unsure of her teaching. She continued to use the instructional moves that characterised her approach. The science lessons took longer and required more clues than she had thought, resulting in her frustration and feelings of time pressure. However, the learning benefits to the children in the construction of knowledge were enhanced by her approach. They did find words to discuss the concept and they developed the knowledge mutually.

In summary this teacher:

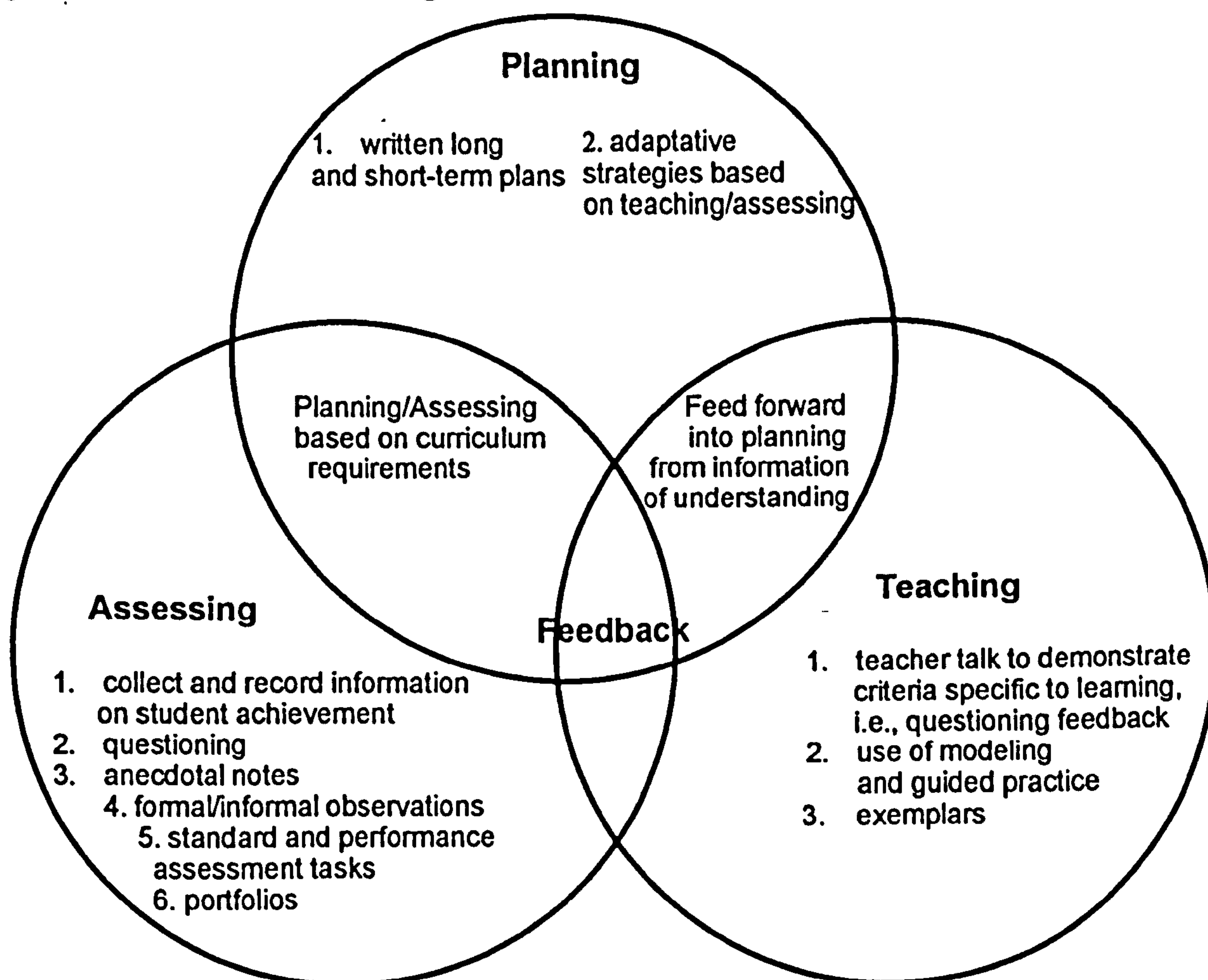
- exhibited a problem-solving approach to student learning *and* to her own teaching.

- manipulated her classroom organisation to collect information on student learning. She used a variety of strategies necessitating a variety of teaching settings including whole class lesson, small group sessions, individual observation periods and student-led feedback sessions.
- uses a variety of questions directed at articulating the processes behind her own thinking. She asked questions that required pupils to do the same. Questioning of this type occurred during the teaching and assessing phases of work.
- made moves to develop a collegial relationship her pupils.

A model of Formative Assessment Strategies

After analysis of two cases, a rudimentary model of formative practice emerged. The original planning, teaching, assessing cycle has been split into three spheres of their own, encompassing the strategies related to each phase. These three circles intersect each other, suggesting that they are integrated. The intersection sets of these three circles indicate the processes which connect the three together. The model of formative assessment will be developed and refined by the analysis of two more case studies.

Figure 4.1 Initial Model of Integrated Formative Assessment Practice.



Chapter Five

Alexandra Primary School

This case study was conducted in a school less than a mile away from the D'Arcy Road, however, the catchment area included a higher socio-economic group. Alexandra Primary enrolled 208 students in years Reception to Year 6 in 1992-93. There were 30 students in each class. 42 students were eligible for free school meals. The school is ethnically mixed with no dominant group. The ratio of boys to girls in 1993-4 was near to equal.

School Context and Assessment

At Alexandra Primary, the school culture appeared to be greatly influenced by the music programme. The school choir and small chamber orchestra were made up of Year Four, Five and Six pupils, yet many school programmes in the early primary years focussed on the training of students in singing, recorder and other instruments. According to the head teacher, the school was selected by many parents because of the reputation of the director of music. At the time of data collection from December 1993 through January 1994, Alexandra school had seven full-time and three part-time teachers. The school itself was located in an affluent London area, and was surrounded by a large number of private elementary schools. The head teacher commented that in the past, many boys were placed in the school until age seven, at which point they were transferred by their parents to a private school. The music programme, which involved children from year two on, allowed the school to promote itself as a state school with something extra. The school choir and music ensembles had a great number of concert dates during the school year. The programme required fundraising activities and parental involvement. The teachers seemed very proud of the pupils' accomplishments in the arts. For this reason, a poor report by HMI inspectors in 1992-3 was unsettling to the staff. Comments

relating to this poor evaluation were frequently made by the head and the staff during the data collection period.

Information on Assessment from the head teacher interview

Information concerning school context was collected through interviews with the head teacher as well as through the analysis of school documents. Before becoming head of Alexandra Primary, David Walters had been deputy head of another school and a class teacher for six years.

To the head teacher and the staff of this school the National Curriculum signaled, “a complete take-over by government.” The size and amount of curriculum content was “off-putting”. Science, to this predominately arts primary school, was “the biggest shock”. The teachers tried to read it and condense it so that it could be understood. They tried to “put it on one sheet of paper” to make it more manageable. The head teacher found the curriculum design with outcomes very “worrying and rigid”. However, when the teachers spent more time with the documents they found that a range of expectations was included. In general, he felt his teachers had a difficult time, “holding it all in the mind” and it didn’t really fit in with the method of topic work or integrated study so familiar to the teachers at this school. After working with the documents, the teachers began to find the content more realistic and found their own way of using it. The science material was still problematic. According to the head teacher, many felt that depth has been sacrificed to breadth. In general, the head has interpreted his role as a “filter” for his teachers, to protect them from too much change, too fast. The overall feeling about the implementation was that “resources were wasted” and still “one had the feeling of coming away untrained”. More time was needed for training, support and implementation because everyone “learnt it (how to use the NC) on the run.”

School Assessment Policy

The Year Two teacher was designated as the School Assessment Coordinator after her work using SATs the previous year. She worked with the head teacher to develop a first draft of a Records and Assessment Policy (See Appendix 5.1)

Assessment skills were titled "Managing assessment". In class assessment was term "continuous assessment" and included observation, recording, questioning, active listening and discussion with other members of staff. Only one staff meeting had been devoted to understanding these skills.

The policy stated that in-school moderation meetings were to be implemented twice a year to coordinate their grading and "to ensure that Statements of Attainment are being interpreted in a consistent way." Teachers had just begun to collect samples of student work, labeled with the curriculum subject name, AT level and number, with the teacher's initial and a date. According to the head teacher and the year 1 and 2 teachers, record keeping had changed a great deal in the school both as a result of the new curriculum and as a response to the poor whole school evaluation. The questionnaire data confirmed this comment. Class record-keeping included NCAT sheets (National Curriculum Attainment Target sheets). ATs covered in a year were to be highlighted. Project Planning Sheets (PPS) were designed to show the work covered each half-term. Individual files for samples and assessments were to be kept in class. Samples were to be collected to show achievement and/or a child working towards an AT level. The policy stated that project work should be sent home at the end of the year, but that current exercise books should be passed on to the next teacher so that they have information of the child's current level of work.

The policy exhibits an initial attempt to establish methods for formative and summative assessment. Before the National Curriculum, the

school used the Primary Language Record or other reporting documents as dictated by the Local Education Authority (LEA). Teachers made their own in-class assessments and reports were checked and signed by the head teacher. It is evident that the National Curriculum and its assessment arrangements have changed the way the school viewed assessment and reporting. They were trying to create new systems for summative reporting and data collection in compliance with the national requirements.

School Context

Results from Questionnaires

Table 5.1 Results of Teacher Questionnaires (N=7)

Part A- Assessment Practices

Rate each one on a scale of 1 to 5 to show the importance you attach to the activity.

Assessment Practices	Most Imp 1 2		3	Least Imp 4 5	
Close observation of a child working	1 (14.3%)	3 (42.9)	3* (42.9)	0	0
Questioning during a task to see if a child understands	4* (57.1)	2 (28.6)	1 (14.3)	0	0
Questioning at the end of a task to evaluate the success of the lesson	2* (28.6)	1 (14.3)	3 (42.9)	1 (14.3)	0
Questioning at the end of a lesson to reinforce the main concepts	2 (28.6)	2 (28.6)	2* (28.6)	1 (14.3)	0
Giving verbal feedback to a child about the quality of his/her work	4 (57.1)	1* (14.3)	2 (28.6)	0	0
Giving written feedback marked on the work	1 (14.3)	2 (28.6)	0	3 (42.8)	1* (14.3)
Deciding on levels and recording information about a child's work	0	2 (28.6)	3* (42.8)	2 (28.6)	0
Using SAT-type or other standardised tasks to support your on-going assessment	0	1 (14.3)	2* (28.6)	4 (57.1)	0

- asterisk denotes Year One teacher's responses.

Discussion

These results indicate that in this school, teachers' assessment

practices include a mixture of summative and formative activities. Verbal feedback and questioning students to get an understanding of their grasp of concepts are rated very highly, and these are key formative assessment tools. The teachers gave a split but generally low rating to deciding on levels as an important assessment activity. Given this lower rating it is possible that performance tasks like the SAT materials, may be used more as a formative assessment tool rather than a means of collecting achievement data to be used for reporting. Questioning as a form of self-evaluation to track the efficacy of their teaching, is viewed as somewhat important to their assessment practices. There is less consistency of response between teachers in this school. This indicates that there may be less agreement and collaboration in the school in terms of assessment. Such a finding is opposite to what might be expected, given the level of collaboration required by whole school topic work and by the whole school culture, unified by a focus on music.

Table 5.2 Results of Part B-Planning Source Materials. (N=7)

This question attempted to find the sources of the teachers' ideas for planning lessons. Teachers were asked to "Circle the most appropriate number where 1 is very useful and 5 is of little use to your planning."

Sources of Planning	Very Useful		3	4	Not Useful
	1	2			5
Published work schemes and teacher handbooks	1 (14.3%)	1 (14.3)	4 (57.1)	1 (14.3)	0
Your own records and ideas from observing the child	2 (28.6)	5 (71.4)	0	0	0
National Curriculum Statements of Attainment	0	2 (28.6)	4 (57.1)	1 (14.3)	0
National Curriculum Support Material such as SEAC's Pupil's Work Assessed	0	0	3 (42.9)	3 (42.9)	1 (14.3)
LEA or school-produced plans	0	0	3 (42.9)	3 (42.9)	1 (14.3)

Discussion

The results of Part B indicate that many teachers rely to a great extent on their own assessment and ideas from observing children in their classrooms. To do so suggests that they depend on their formative assessment skills routinely. Beyond this source, the variety of responses indicate that teachers use curriculum documents, schemes of work and texts as well as LEA or school plans to help structure and give depth to their planning.

Table 5.3 Results from Questionnaire Part C- Influences on Teacher's Assessment Practices (N=5)

Sources of Influence ranked 1-6 where 1 is the most important influence on teacher assessment methods and 6 is the least important. Note that some teachers ranked several factors of equal importance.

Ranking by Teachers in the School						
Sources of Influence	1	2	3	4	5	6
Teacher Training	1 14%	0 0%	4 57%	0 0%	1 14%	1 14%
Experience In The Classroom	5 71%	1 14%	0 0%	0 0%	0 0%	1 14%
National Curriculum Requirements	0 0%	1 14%	2 29%	4 57%	0 0%	0 0%
National Curriculum Support Materials on Teacher Assessment	0 0%	1 14%	2 29%	2 29%	0 0%	2 29%
In-Service Training	0 0%	3 43%	1 14%	1 14%	0 0%	2 29%
Ideas ,Resources & Methods Learned From Colleagues at This School or Other Schools	2 29%	4 57%	0 0%	0 0%	1 14%	0 0%

Discussion

The results for this school indicate that experience in the classroom

and the ideas, resources and methods learned from colleagues are the most important sources underpinning the development of the teachers' assessment practices in the school. INSET and NC support materials were ranked lower as sources of influence. Two teachers felt the INSET was so poor it could not be rated at all. National Curriculum requirements were somewhat influential as 57 per cent rated it at a 4. This indicates that the curriculum documents on their own are not used as a key tool to teacher assessment at this school. Even the year two teacher, who was preparing the children for end of Key Stage 1 assessments ranked her own experience in the classroom as the number one influence on her current practice. She ranked the all the curriculum documents and materials as a 4. This would indicate that the National Curriculum materials had not yet made an impact on teacher practice for this year two teacher, despite the fact that she was in the position to be most influenced by them.. Teacher training was also somewhat influential, although when asked, not one teacher said they had taken a specific course in assessment.

Table 5.4

Results on Use of the Curriculum

E. 1. a) Use of Statements of Attainment (N=7) "I use Statements of Attainment to plan my daily lessons."

	Mathematics	English	Science
A Lot	0 0%	0 0%	1* 14%
A Little	5* 71%	5* 71%	4 57%
Never	2 29%	2 29%	2 29%

*The asterisk denotes the Year One teacher's response.

Discussion

The results for this question indicate that the teachers are making

some use of the Statements of Attainment for Planning. The Year Two teacher comments, "In English, AT 3 Level 2 children will have to have produced some evidence of chronological writing. Therefore, I ensure that this is developed through weekly diary writing sessions."

Table 5.5 E. 1. b) Use of Statements of Attainment (N=7)

"I use Statements of Attainment to decide on a child's achievement."

	Mathematics	English	Science
A Lot	1* 14%	1* 14%	1* 14%
A Little	2 29%	2 29%	2 29%
Never	4 57%	4 57%	4 57%

*The asterisk denotes the Year One teacher's response.

Discussion

These results suggest that while some teachers are making use of Statements of Attainment for the purpose of assessing a child's achievement, half of the teachers never use them at all for this purpose. The Year One teacher suggested that they had not received the in-service training necessary to use the Statements of Attainment for assessing. Only the Year One teacher used the Statements a great deal for this kind of assessment.

Table 5.6

E. 1. c) Use of Statements of Attainment (N=7)

"I use Statements of Attainment to help diagnose a child's strengths and weaknesses."

	Mathematics	English	Science
A Lot	0 0%	0 0%	0 0%
A Little	3* 43%	3* 43%	3* 43%
Never	4 57%	4 57%	4 57%

*The asterisk denotes the Year One teacher's response.

Discussion

These results suggest that while some teachers are making a little use of Statements of Attainment for the purpose of diagnosing problems and strengths, the same number do not use them at all. This section of Part E is one of the most relevant to the question of the use and influence of the Curriculum on Formative Assessment practices. Judging by these responses, the curriculum has not made a clear impact on day to day diagnostic assessment practice.

Table 5.7 E. 3. a) The Influence of the National Curriculum on Teaching
“My teaching methods and class organisation methods have been influenced by
the National Curriculum.”

	Mathematics	English	Science
A Lot	1 14%	1 14%	0 0%
A Little	3* 43%	3* 43%	5* 71%
Never	3 43%	3 43%	2 29%

*The asterisk denotes the Year One teacher's response.

Discussion

The responses to this item indicate that many teachers have made adjustments to the way that they teach in order to include all that the Curriculum expects at each grade level. Science was the most influenced in this way. The Year Two teacher, about to complete testing for key stage 1, felt this pressure most keenly. She added this comment to her questionnaire:

“I am ever aware of the demands that have to be met by the end of key stage one, in terms of curriculum coverage and assessment. Therefore, I find myself spending far less time on each area of the curriculum than I would like, just to ensure that I have ‘touched’ on every area by the end of the year. I see most pieces of work as samples to justify N.C. levels I have decided on each year, rather than using them more diagnostically and to benefit my planning for each child.”

From her comments it seems apparent that the potential in the curriculum for formative assessment has been subsumed by the summative imperative to prepare for key stage one testing and reporting.

Table 5.8 E. 3. b) The Influence of the National Curriculum on Teaching (N=7)
“My recording keeping methods have been influenced by the National Curriculum.”

	Mathematics	English	Science
A Lot	3* 43%	3* 43%	3* 43%
A Little	2 29%	2 29%	2 29%
Never	2 29%	2 29%	2 29%

*The asterisk denotes the Year One teacher’s response.

Discussion

From these findings, it appears that record keeping at this school has been the more influenced by the National Curriculum than any other part of teacher practice investigated by the questionnaire. The Year One and Two teachers noted the highest use of the curriculum. The Year Six teacher had the lowest use of the curriculum. This is interesting because it might be predicted that a year six teacher, faced with key stage two assessments in the future, would be using the curriculum more. It appears at this school that the most important change in teacher practice is in recording and reporting. Half of the teachers said their recording practices had been influenced a lot by the new curriculum requirements. However, this does not appear to have enhanced formative assessment skills.

Teacher Background and Classroom Context

The Year One teacher, Anne Birrel, came to teaching after working as an systems engineer in a technical business. She was over 40 and the single parent of a 12 year old son. The teacher asked the children to call her Anne in class instead of Ms. Birrel. The teacher's background in science made her especially interested in the processes and concepts around science. The classroom was arranged to allow quiet seat work and group work at centres. (See Appendix 5.2) She organised her classroom around centre work at one end of the classroom and quiet seat work at tables at the other end of the room. In general the balance of the two areas created a busy classroom but controlled in terms of activity and noise.

Teacher Views on Curriculum and Assessment Issues-Questionnaire and Interview Responses.

The information noted here is extracted from questionnaire responses as well as from some interview data. The first section of the questionnaire asked the teacher to rate the importance of assessment strategies in her work, where 1 is a very most important assessment activity and 5 is an unimportant practice. (See Table 5.1) The teacher rated close observation of the student as a somewhat important assessment activity (3), but questioning during a task to see if a child understands the skills, task or concept is rated the very highest in importance (1). Giving written feedback is a very low priority (5). This is not surprising given that Year One students are beginning readers. Recording information and deciding on levels of achievement is somewhat important to this teacher (3). The eight practices listed in part A of the questionnaire include both formative and summative assessment practices. The first five relate to formative and the last four relate to summative practice. (Giving verbal feedback to a child about the quality of the pupil can be used for both types of assessment depending on the timing and purpose of the feedback.) The raw scores were inversely scaled so

that a high score indicates a high level of use of these identified assessment practices. This Year One teacher scored 27 out of 40 possible points overall. The breakdown of her ratings is also relevant. In the first five practices relating to formative assessment, she rated them 20 out of 25; in other words, all the practices were of great importance to her work. The last four, or summative practices, she rated 11 out of 20, the only important factor was the verbal feedback (rated 2). From Part A on the questionnaire the teacher indicates frequent use of assessment practices and in her view, primarily uses on-going formative strategies.

In interview, the Year One teacher stressed that her topic planning provided the fundamental structure for her daily planning because “it includes all subjects.” On her topic planning sheets, National Curriculum attainment targets (Ats) were not listed. However, ATs were included on the school wide half-term planning sheets. Copies of these plans were handed in to the head teacher. The school had instituted these planning sheets to track coverage of topics and ATs. Each year what has been “covered” is blocked in with yellow highlighter.

The highest influence (rated 2) on her planning comes from her own ideas and records from observing students. This would seem to indicate that formative assessment skills are an important part of her teacher practice. However, the National Curriculum documents were rated equally high. School or LEA produced schemes were not rated highly (4) nor were National Curriculum Support Materials. Published schemes were considered somewhat helpful, rated at 3.

The highest influence on her assessment skills were her own experience in the classroom. Also of importance were the influences of school colleagues and INSET. National Curriculum materials were only somewhat important (3). Her initial teacher training was rated at the very bottom (6). She commented that she learned very little in her teacher training year.

In interview about the Curriculum as a whole, Ms. Birrel stated that she liked the emphasis on Science which she enjoys. The curriculum is “more systematised which I like.” She dislikes the amount of material to be taught and “always feels overloaded and not doing enough. There’s a tendency to skim over things instead of doing them thoroughly.”

Formative Assessment Practice

The Teacher in Action

Planning

1. Instruction is based upon use of the curriculum outcomes or requirements.

To this teacher, topic planning was the most important level of decision making because it incorporates all subject areas and skills. In interview the teacher said she decided on the topic with other teachers after a "careful read through" of the curriculum to "see which statements she could cover with a task or topic." She was most concerned with developing cross-curricular activities within the framework of the topic. She felt the National Curriculum documents helped her with this. For her, specific statements of attainment were more useful, rather than ATs, or Programmes of study. In the autumn term, the entire school was involved in a water theme. Math, science, art and language tasks and activities related to this theme. In the year one class, boats, water, measuring, mixing of liquids, art projects, music and drama were all thematically integrated. However, the teacher did not list the ATs on the planning sheet. She said she sometimes includes more advanced concepts in her plans than the curriculum requires. For example, during the water theme, the year one children made pumps, created floods and erosion experiments as well as studies of insulation, cooling and heating concepts. They were preparing a dramatic presentation about the water cycle for an assembly. School assemblies over the term and especially at the end of term, involved classes presenting projects, plays or music on the water theme. The term plan was handed in to the office. These plans were checked to see that key skills in the curriculum were addressed and that topic work was co-ordinated. In her weekly planning sheet, large blocks of time were given to topic project work.

The teacher had an extensively mapped weekly plan, which included

details of diagrams to be drawn on the board, lists of examples and lists of games which were described with the skills they required. (See Appendix 5.3) A check-off sheet for the topic work was kept with her weekly plans. (See Appendix 5.4) Math time was not noted on the weekly planning sheets. Math explorations were planned in relation to topic work. Maths, except for computational math, was integrated with science. Concepts explored included Venn diagrams for float and sink experiments, water clocks, measuring and weighing liquids and solids, and hexagon shapes in snowflakes. Adding and subtracting practice was done with the SPMG Infant Mathematics workbooks. Some children used counters and other manipulatives for this work and others did not. The children were all at different levels in their math workbooks indicating that the students were allowed to progress at their own pace. The work booklets were corrected by the teacher during the lesson. She moved constantly about the room monitoring and correcting booklets. Short feedback exchanges occurred at these periods.

Language

The language programme was allotted the most time in the school day. Reading was the most important year one skill to be attained according to the teacher, and thus figured prevalently in her planning. Handwriting and phonic work plans were written out in full. Examples for phonic-rules such as the silent e, were listed so that she had enough examples for the whole class to try. This teacher used whole class lessons frequently, and often used planned detailed notes from which to speak in front of the class.

Science

In Science lessons, any diagram or model to be used was drawn out in her planning notes. The Nuffield Science and Maths material were good “idea” books for this teacher. She also used the LEA Library Service for additional help and resources with topic planning. She mentioned that the Science curriculum was a particular help in her science planning, although as a former engineer, she felt confident about her skills in this area.

2. Information of current student achievement and conceptual understanding used to feed forward into planning and teaching

The teacher kept some checklists noting whether or not a child had “experienced” an activity but she did not make notes on whether or not the child understood it. The teacher did not have any formal way of monitoring achievement or tracking it for use in future planning. However she reported, “I plan by the week but its always subject to change if I see that they haven’t understood.” She used group collaboration at the work centres; an instructional approach which requires long periods of investigation time. In terms of adapting her planning, the teacher made comments such as, “They need to do that again tomorrow” and “ this needs much more time to get this right”.

2. Self-evaluation and planning adaptation

The teacher was responsive to difficulties as they arose in class and it was observed that she re-visited a concept or extended a lesson if she saw that it was warranted. For example, she said she “worked in” phonics with handwriting because many children did not know the sounds of letters. (Sections of this exchange are used in the section on questioning) A few did not know all the letters of the alphabet by sight. This may be an example of the teacher reflecting on the needs of the class and adapting the lesson to accommodate those needs. She used the same method of whole class discussion at the end of a work session as was observed in the D’Arcy Road case study. The format was used to review the basic information and allow the children to explain their processes and learning to her and to the class. The teacher did not add or change the materials at the centres from these dialogues. She did however, adapt her instructions and her explanations as a result of the children’s explanations. In an interview after a science lesson at the water table session, the teacher was asked when and how would she discuss the principles behind their

work. She commented:

After some of the class has experienced it. That way I can go over their understanding so far, repeat what happened and get them to explain it to others. Then the others can try it. I don't think this is actually in the NC but the idea of density is important so I'm doing it. I don't call it that- I call it making it thinner, containing more air or pushing more water away. I only note a list of names in my book after they've done it if they are exceptionally good or bad and then I make a note of it to check on later. I don't have time to make notes on each child while they work. Too many others are asking me for information. I don't think it's possible to only observe with five and six year olds.

Teaching

Formative assessment in the teaching phase of work encompasses all discourse used to communicate an understanding of the criteria specific to learning. Formative assessment strategies in teaching make particular use of questioning techniques, expert or student exemplars, modeling and guided practice to convey this criteria. In this section, examples of observational data are given to illustrate the teacher's use of formative strategies in her teaching practice.

Language

During a writing session, the teacher modeled the kind of process required by writing and made use of questioning and examples. She asked them to tell her something they had done last week while she was away. One child said they had done aerobics. The teacher said "Right, now I want lots of detail as to what happened, and where and whether you liked it or not." She said this twice to the children but did not write the instructions on the board. The child gave her details which could be incorporated into the piece of writing, She then

asked other children to tell what happened and asked about what happened, when and whether they had liked it or not. In this way she used student examples, but guided them through the process of the task.

In handwriting, the teacher used whole class teaching frequently and modeled the correct method or process to be learned. In this example she talked as she modeled correct letter formation. As in previous case studies the discourse is analysed using the descriptors of conversation developed by Barnes and Todd (1977:20-21) and Edwards and Westgate (1987).

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T-The letter we're going to do today is the letter q. This is the first time we've used our nice new alphabet letter chart. Let's say the letters on it. (Children say the letter names in unison.)

Q is a funny letter which nearly always comes together with a partner - u. (She draws the q and the u on the board very slowly twice.)

The stick goes under the line. Come up here to join up with the u. Who knows what sound they make together?

C - q (says the letter name not the sound)

T - no -Think of the sound they make together in the picture (she refers to the alphabet chart with the letters and pictures. There is a picture of a queen)

C - several say quee or something incorrect

T - No no, it's qu like queen. Can you think of another?

C - (hand is up) quilt?

T - Good. Who has a quilt on their bed? Quiet- you hear that everyday from me.

(laughter)

C - Quack

C - Quick

T -Yes, please be quick.

You're very good at these.

C - Quin?

T- I don't know that word. I thought you were going to say quince.

Teacher initiates discourse in the change of topic, uses the collegial 'we' to indicate the teacher's involvement in the process. Reviews letters with chart as an exemplar and for practice. Response is elicited as they all speak in unison. Teacher expresses feelings about the letter.- The teacher talks as she models correct formation.

Interestingly, she is teaching cursive writing instead of printing. She said the pupils were able to write better than print so she decided to teach them both.

Teacher uses a logical process in that the children are to apply the sound to find other examples.

Closed task - there is a right or wrong answer and the children understand this.

Teacher uses praise as a motivator. She also uses humour and jokes with the pupils.

The children's responses lead to a response she has not understood. Teacher allows this example, shares her lack of knowledge of it adds her own interpretation but does not invalidate the pupils.

At this point the teacher returned to modeling the formation of qu. The children drew these letters in the air twice before starting on the page. The teacher went up and down the rows correcting individuals. With two students she reviewed the sound again, after she questioned them.

Science

The Year One teacher used questioning and experimentation in a variety of ways. In some situations, she posed a question but did not tell them the answer. She felt this encouraged exploration and guided their discoveries. She most often asked the children about their discoveries and then summarised theory later in a whole-class discussion.

T - This bottle cap- Can you make it float? Let's turn it over. (she helps them--)

C - It floats !

T - What makes it? Why does this happen? (no one is sure) Think about that, when you're discussing what happens after.(She moves to a group trying to make a ball of plasticine float.)

C -Anne, it doesn't work.

T - How could you make it float? It won't float as a ball. But maybe if it's more like a boat it might. Could you make it? Remember you've got to work with Sylvia. You can't do things without your partner.

Teacher does not tell the answer- instead raises new questions, request pupils to offer their own viewpoint on the concept, directs collegial problem-solving strategies.

Use of why questions and stimulates thinking and discussion between pupils.

The teacher is addressed by her first name. This could be considered a move towards collegiality.

Teacher scaffolds learning by referring the pupil to a strategy. Asks them to use evidence from everyday life ((like a boat) to solve the problem. Logical process is implied when she suggests a method of finding out. Again, she directs them to work together.

The teacher was very concerned that the children understand the scientific method or inquiry using prediction, testing, observation and drawing conclusions from the observations. She modeled the method for writing down the results of the experiment and gave the children 20 minutes to make their observation pages. At the float/sink table, the children were to draw a picture of the item, make a prediction, test it, and then draw a line to the word Float or Sink to record their findings. When the children were working on their float and sink experiment, one group threw all the test materials into the water. The teacher came by and started taking them out and looked at their data sheets. Only a few drawings of the test materials had been done. She went over the process again and watched them. The teacher observed the group until they got the process correct.

“Wait a moment- you haven't finished your pictures before you test. When you've finished your pictures you can test. Take your box of things and look at them. Well done, you've got the idea!”

The teacher used socratic lessons to review the principles. In one lesson, the teacher used questioning in a whole class setting to teach the concept of waterproofing. When asking for information. This teacher often asked children who did not have their hands up, as well as those who did. She did not, however, have a chance to question everyone in the class and it was clear several were not paying attention.

T - What do you use in the bath that isn't waterproof?
 C - A sponge
 T - Great!
 C - You can squeeze it and then fill it up very heavy and squeeze out the water again.
 T - (Teacher only partly hears as there is noise) Let's listen now everybody.

T - What else isn't waterproof?
 C - Paper
 T - Right, let's remember and use our paper boats- what would happen if we left our paper boats on the water?
 C - It would get soaking.
 T - Right and what would happen then because it absorbs lots of water?
 (she points to a child without his hand up)
 C - It would make it sink.
 T - Yes-What else?
 C - a flannel
 T - Yes- lots of loops of cotton to catch the water. If you had a waterproof flannel it would stay dry!
 (Everyone laughs—several other examples of things not waterproof were discussed.)

Teacher initiates discussion with a closed question in that few answers could be correct. A Initiation/Response/Feedback sequence is used.
 The pupil is praised and thus feels motivated to extend his explanation. The teacher's attention was drawn away by others for a moment. Leaves the quest for examples and moves on to the explanation of the process. Draws attention by the framing move-Listen now/
 Right

Shifts to the category of what isn't waterproof to get at the characteristics of waterproof objects.
 Uses evidence of previous learning to promote cognitive reflection in the students in order to make connections between new information and old.
 Proposes a cause using a logical process and then returns to the questions eliciting examples to indicate to her that they have understood. She does not always repeat what a child has said when it is correct. This had the effect of making children listen to each other and not direct their attention only to the teacher. This could be considered a move to decentralize the focus on the teacher..

Adds theory
 ((loops of cotton) to explain concept.
 Indicates her approval with humour.

In this classroom, most theory was given during whole-class sessions with questions and examples from student work. This ensured that the children had been exposed to the theory. In another example, after a group had completed a session at the art table, the teacher had them explain to the class what they had learned. The teacher listened and asked questions during the explanation. In this way the teaching effortlessly became an opportunity for assessment. The emerging understanding of waterproofing was developed from the pupils' own work and words. The excerpt is given in full in the feedback section. (See Type D2 feedback below.)

Assessing

1. Use of Feedback

This Year One teacher used a wide variety of feedback techniques, many falling into the categories defined by the Gipps/Tunstall (1996) feedback typology.

Feedback Type C- Specifying Attainment

During two sessions on writing their journals, the aide and the teacher walked around the tables, checking each child's progress. Children were given specific acknowledgment of their achievements. Through these comments the criteria for success became evident. Almost all the comments praised picture drawing with detail, trying longer words, neatness, and spelling accuracy.

Other comments included:

T - (pointing to some writing) A bit small and messy.

T - (to a student writing a letter)What was it you were to put at the top of the page?

C - The school?

T - Right. Have you got that?

C - uh...no.

T - Well put it on then.

Type C- Use of criteria for work or behaviour

The teacher was keen that the pupils depend on each other for ideas and strategies during group work sessions. She would direct students to ask and discuss the work with their partners, when they came to her for help. She would also expect them to make notes of words or ideas so that they could get the answers themselves the next time the information was needed.

C -Anne, do we do this first?

T - You'd better speak to Olive (your partner) and decide. Off you go.

T - How do you spell wood?(she underlines it in the student's book)

C - uh w- o- o- d

T - Good. Now write it in your word book and we'll put it in.
(your good copy)

Relating to behaviour, the teacher also had a method of correcting children without making them feel as if they had been corrected at all. She would repeat the criteria, rules or instructions to individuals without sarcasm or a negative tone, but would begin by saying, "This is nobody's fault." One example of this occurred when two children were squabbling over a chair during session of a group work. The teacher said, "You're not to blame but perhaps you misunderstood. Whilst we have special tables, we don't have special chairs." This made the change of chairs easy and no one felt badly.

Type C- Specifying Improvement

When working on writing the teacher would walk around and make individual corrections.

T - This is good. try this part again. Put a proper stick on it.

T - This is not printing but joined up writing. You've done this first one well. Now continue but very small-(watches) well done.

T-Do you think it might be a good idea to use two colours (for your lines); one for Floaters and one for Sinkers?

In writing, the criteria for improvement were given clearly.
This example occurred the day after the phonics lesson on the letter q.

T - Now, because you've been to the National Gallery and seen the Queen of Sheba, I thought we'd do the word Queen.

Anyone know? John?

C - q u e e n

T - Right. Now at the end of this class if anyone asks you how to spell queen how many should know?

C - (children squirm and laugh)

T - Everybody- Helena.

Watch and Remember! (The teacher modeled and talked through the cursive writing of this word. She wrote it twice--a boy whispers to himself about spaces.)

Don't forget your finger spaces. Jack already reminded me.

Well done Jack.

Here the teacher gave specific feedback on how to write the word and reminded them about spaces between the words which will improve their work. At the same time she used a child's suggestion and praised him. A sense of collaboration was evident even though the teacher was at the board in front of the class; traditionally a position of leadership. Again in this example, she tried to connect new words to something they had just discussed or studied, in this case, a visit to the art gallery. The teacher said, "Watch and Remember" repeatedly during the data collection period. This had the effect of focusing their attention on her.

Type D - Additional use of emerging criteria.

Here, the student plays a role in the presentation and development of ideas. The teacher also connected lessons together in an effort to transfer concepts to new situations.

T - Perhaps you could tell us what you did at the art table.

What did you have to do?

C - You had to dry some shells and go over to Goldie (the pet gold fish) to see. And if you wanted to you could draw a sea horse.

T - (the teacher points to the other child holding up a picture)

You tell us as well James. Tell us what you drew with.

C - Well you put the paint on- you get a nice feeling of the sea.

T- mm- If you drew with pencil what would happen?

C - The crayons couldn't mix with the paint. The paint couldn't go over it.

T -It couldn't, can't cover the crayons. Why couldn't it? The wax crayon. Why did the paint go away from the wax?

(They are holding up James' painting and pointing to the crayon lines showing through the paint wash.)

No one can answer

T - Get out the oil and water experiment. (A child goes to get a jar on the shelf. She gives it to the teacher.)

Remember we tried it with syrup and juice-and water?

Three things together? What happened?

C - The oil was lighter.

T - Yes, what else?

C - It couldn't mix up very well.

T - It couldn't mix and because it was light it floated. The same kind of thing happened. The syrup and water have mixed now. (She is shaking the bottle) Now what do you think the wax crayon is most like- the mixing syrup and water, or the oil and the water?

C - Yes the oil - no the syrup (no clear responses)

T - No the paint ran away from crayon. Look at the pictures- look at Goldie (in James' picture) You can see Goldie quite clearly. Say I did the fish with orange crayon and then used blue. What would happen? Have you mixed yours? (She points to James and he shakes his head no.)
You could say the wax is "waterproof". What kinds of things are waterproof?

C - Watches.

T - Yes, if they're specially made. What are the fronts made of?

C - Glass

T - Glass-right. If the rain hits the glass does the rain come through?

C - No

T - What else?

C - A raincoat

T - What kind of material is a raincoat?

C - Plastic

T - Or a wax jacket--(shows hers at her desk). Now there's our connection isn't it? Where we used our wax-crayons it became waterproof. What about something else that isn't waterproof?

C - Cotton

T - Yes, that's absolutely right!

In this example and others found in the transcripts, the teacher made comments or asks questions which provided links to other work or concepts the children had been learning or talking about. In the example above, she drew out their thinking in applying the waterproof concept to other real life objects. In this case she also got out an experiment previously made by the pupils. The

teacher said she makes these connections very deliberately. After the teacher set up a child painting over crayon drawings, she said to the interviewer, "I will draw and reflect on this when she does the floating and sinking experiment." Drawing connections and transfer of learning is higher level thinking skill. It appeared that Anne took a great deal of time for questioning and explaining in order to build in the theory of waterproofing by connecting it to work or experiences the children have had. This kind of feedback may be another level of Type D feedback where the teacher and students are in fact constructing the way forward but in terms of theory rather than product. In this example, the teacher used the work of the first group as a example of the theory and the outcome of the assignment. Her questions calling for more examples helped her to know whether the children were understanding the idea or not. She asked questions about waterproofing and oil and water not mixing, when each new group came to work at the art table. She did not write down any anecdotal notes about their individual understanding.

The teacher also used questioning on another day to review concepts again and help individual students make connections in their work. For an integrated art and language activity, books, the goldfish bowl and a dish of shells were set up. Children in the group were to look at the detail of the fish and shell.

T- Remember our oil and water projects Tenille?

What happened?

C- The water sat on top.

T- Yes that's right. They wouldn't mix. Well, crayons are oily too. If you colour your picture and then use water paint, the crayon won't mix and will show through. Can you do that?

Type D- Mutual critical appraisal

After several groups had completed the crayon/wash picture, several

were viewed in front of the class. She had two pictures held up by students that had crayon lines almost covered by paint and two which had clear crayon fish and plants in the paintings.

T - Now think about your pictures. Can you think of anything which would make your picture better?

C - (no real responses)

T - Which kind of crayon works better - thick or thin crayons? I mean which crayons are more waterproof.

C - The thick ones.

T - Yes—These lines of Nadia's have broken bits where the water's gotten through. These (she points to thick-lined drawings) are very good.

Here, the teacher conducted a discussion about improvement with the children, asking them for their ideas and prompting the children to evaluate work critically. Again she repeated the theory relating to waterproofing so that the children might remember and use the concept in their own work. This provided an explanation as to why the lines disappeared and gave a solution to the problem. -

Use of other assessment strategies

Theory on formative assessment had indicated that discourse including the use of feedback is needed by learners to close the gap between current achievement and improvement. The teacher's practice provided evidence of this kind of discussion in several subject areas. She specifically modeled or gave instructions about what the problems might be and the processes needed to improve their work.

Maths

The children were placed in different groups for different math

activities. For work with manipulatives, the groups were of mixed ability. For workbook exercises, the groups were arranged by work habits. One group, the teacher described to me as 'all having attention problems'. To this group she said when introducing them to me within their hearing, "They are all working well but needed help getting finished." The children all agreed and laughed at each other. They were given somewhat more time to finish and the teacher hovered more closely to them during the work time. She also corrected their work as they finished each short group of computations. This had the effect of assisting the group with completion of the task, the problem she had directly communicated to them. In this way, they were able to improve. With the other children, the teacher corrected them at their desks after they were finished everything and were working on another activity at their desks.

Language

The feedback the teacher provided for several students in handwriting was to directly model the process of correct letter formation by holding a child's hand and writing several examples of the letter. The teacher corrected errors and gave information as to how improve the work. This was done individually while students were working at their desks or in groups. In writing, the teacher discussed achievement but also indicated ways of for the student to check his or her own work.

T- Excellent and unique description of what you are doing!

Let's check the spelling. Oh here (she points to a word) Let's write it out and see if it looks right! (The child looks at the word and copies it out again.)

Yes that's right.

This could be also be viewed as an example of Type D feedback, a descriptive comment designed to provide the student with a strategy for self-regulation.

Another strategy used in formative assessment is that the teacher

might collect and/or record information on current achievement and conceptual understanding. The teacher made no use of tests but kept samples of work in portfolios or work files. She said, "When you stand back and look at where they were and where they are now--you can see the progress. I've always done it, (collecting samples) but I do them more now (as a result of the National Curriculum assessment requirements)."

The teacher made very little use of anecdotal notes. She made notes only on whether children had experienced an activity or whether they had finished it. In reading, she had the children write in the dates and the titles of the books they had read. She did not write any comments about their reading but only a checklist on how often she had read with them. After lunch, each child picked up a book and went to their own space to read. The teacher and the teacher's helper read individually with about seven children. The teacher explained that she or the helper listened to each child about twice a week. The teacher said she just remembered how each child was doing. During individual reading times, the teacher explained the phonic patterns required by new words and discussed picture context.

In Maths, the teacher used the math work books to check and evaluate adding, subtracting and set-making skills. Data management such as chart and graphs were done through the science curriculum.

Conclusions to Alexandra Primary School Case Study

In the first section of the conclusions, an outline of the findings in this case study are given in response to the research question on sources of influence on formative assessment practice.

1. For the Year One teacher, the highest influence on her assessment skills was her own experience in the classroom. Also of importance were the influences of school colleagues and INSET. National Curriculum materials were only somewhat important (3). Her initial teacher training was rated at the very bottom (6). She commented that she learned very little in her teacher training year.
2. The results for this school indicate that experience in the classroom and the ideas, resources and methods learned from colleagues are the most important sources underpinning the development of the teachers' assessment practices in the school. INSET and NC support materials were ranked lower as sources of influence. It should also be noted that two teachers at the school felt the INSET was so poor it could not be rated at all.
3. The National Curriculum was rated moderately low as a source of influence on formative assessment practice. This indicates that the curriculum documents on their own are not used as a key tool to teacher assessment at this school. Even the Year Two teacher, who was preparing the children for end of key stage assessments ranked her own experience in the classroom as most importance influence on her current practice. She ranked all the curriculum documents and materials much less important at 4. This would

indicate that the National Curriculum materials had not yet made an impact on teacher practice for this Year Two teacher, despite the fact that she was in the position to be most influenced by them.

Finally, it is important to note that this year one teacher had no assessment training other than one staff meeting and a INSET day spent discussing assessment issues rather than strategies.

Summary of Teacher's Practice

Planning

This teacher, in interview said she is a very systematic person and this was evident in her planning. She includes charts, diagrams and long lists of examples she might need and use in her teaching. Her long term planning indicated attention to the curriculum. Her planning is based on a thorough understanding of curricular requirements. This however, did not in itself develop her assessment strategies.

The teacher adapted instruction based on teaching and assessment information. This teacher used whole group lessons to allow groups to explain the processes and the products of their work. The teacher listened and reformulated the explanation to clarify the process or the concept intrinsic to the work. The teacher used questioning to lead the pupils to a better understanding of the concept. She tried to make connections between information and concepts learned. This had the effect of scaffolding learning. However, while she added and adapted her explanations she did not appear to change her materials or the tasks very significantly.

It was not clear from the planning notes that the teacher attempted to feed forward into planning information of learner understanding. However, more time, specific instruction and extra practice were evident in observation.

Teaching

In order to summarise the teacher's formative assessment practice as observed in her classroom, a brief overview of her instructional methods is given. Anne Birrel used four methods of instruction very routinely.

1. Socratic lessons -- The whole class sat quietly at tables and watched the teacher at the front of the class. The teacher drew out answers through a series of questions. She added concepts and theory throughout the discourse. These sessions occurred at the beginning and at the end of a lesson.
2. Whole class lessons with a group or an individual student discussing their work. The teacher used these opportunities for giving praise and feedback which "constructed the way forward" or helped scaffold further learning.
3. Quiet, independent work at tables. Most of the math, writing and reading was done in this way.
4. Group work involving investigative tasks.

Methods 3 and 4 often occurred simultaneously. Children either worked at the tables or were rotated to the other side of the classroom to do investigations or "project work. In effect then, about half of all instruction was devoted to whole class teaching. When asked about this in interview, the teacher said that the content of the curriculum pushes her to teach in this way more, although she favoured whole class teaching as a good method anyway. Interestingly, although the teacher felt that she perhaps spent too much time in whole class teaching, it was observed that this method provided means of using several important formative assessment strategies.

1. Her questioning could be open or closed-ended but she could ask a wide variety of students and get information about their understanding from their answers. Although the teacher was at

the front talking, the students were asked for examples.

suggestions or ideas in a collaborative way. While she did not use a seat plan check list to note whether she had asked all the students for answers, she obviously tried to ask as many children as possible. When the children continued to work in a whole class lesson, she followed up by walking around and checking each student's work and giving feedback.

2. She modeled the process herself or guided a student through the process in front of the other students.
3. She made use of student exemplars of her own or other examples to help children understand the goal or the process to achieve the goal.
4. Feedback was given to the whole class but done in a collaborative way. Praise was integral in the feedback. The strategies or processes required by the work were illustrated by either the teacher or the child or expressed mutually. Children asked questions of the other pupils showing their work.
5. Whole class lessons were used to summarise what was learned and connect it to other work or concepts studied in class.

These findings coincide with conclusions made by Gipps and Tunstall (1996), which suggest that involving the whole class in discussion where the locus of responsibility was in some way shifted to the students, provides extensive learning opportunities.

Analysis of the teacher's discourse indicated that she did attempt to elicit criteria specific to learning through questioning and feedback. There was extensive evidence that the teacher used modeling and guided practice in her teaching. For example, in group tasks, she would observe and note a problem, ask a question, offer a clue to a way forward and then let the children work

collaboratively toward a solution. Use of student or expert exemplars were used routinely. Though it was not evident in her notes, the teacher did attempt to feed forward her understanding of student learning particularly relating to the progress of the whole class. She used her reflections on student understanding to modify her whole class lessons.

Assessing

In assessing learning through discourse, metacognitive questioning into the learner's thinking processes can provide teachers with important information on learning. This teacher asked questions about methods used most often when discussing a product already or nearly completed. The teacher asked the children to explain their methods and understanding.

Part of formative assessment involves collecting and recording information on student achievement, as well as communicating the information to the learner. It was observed that the teacher set up situations where assessment could be collected and communicated or feedback could be effectively used, but she did always maximize the opportunity. For example, she had sent one group to explain instructions about the water paint and crayon work to the next group, but she did not stay to listen to the explanation. She could have learned quickly whether or not the first group had understood and learned from the task by listening to their instructions. The teacher made checklists for coverage of topics but not for achievement or learning.

The teacher observed the children at work informally, she did not conduct any formal observation session. She did not make any anecdotal notes while she observed the groups at work. When asked about assessing children through formal or informal observation she responded, "There's no possibility of writing and watching at the same time."

The teacher did not make use of anecdotal notes but relied on memory for all her information. She only noted extreme cases of good or poor

achievement.

There were no tests used in the class. Investigative tasks at centres was a principal mode of learning and these were not evaluated or assessed in any formal way other than the notes or charts the children produced. The teacher appeared to rely on discussion at the end of lessons to gather information on student understanding

Portfolios were used to collect student work and use them for summative assessment and reporting to parents. The teacher had not heard of involving the students in the selection of the samples in order to give feedback and to develop a shared notion of the criteria for achievement. The teacher called the portfolios project files. The teacher did say she was happy the school had wanted more use of the project files, "because you find out new things" about the students.

This teacher appears to be a critical intuitive (MacCallum et al. 1993). The teacher depends significantly on her memory for diagnostic assessment information. She reported that a teacher cannot be assessing and teaching at the same time although she did this very frequently in her work with groups and her whole class discussion. The teacher felt confident about her use of the NC curriculum and knew "what the ATs and the levels are designed for". She said she goes on to the next level, "if she can stretch someone." It was true that she added more to the science activities than was required by the curriculum. However, she was not as systematic about her assessing as she was with her planning. There appeared to be some discrepancy between what she said she did and what she actually did in assessing children.

Reflective Thinking relating to teaching and learning effectiveness

This teacher was reflective about the ways in which connections between concepts could be incorporated into her teaching. After the teacher set up a child with the painting with crayons, she said to the interviewer, "I will draw and reflect on this when she does the floating and sinking experiment."

This effort to draw connections between lessons was evident throughout her teaching. She appeared to act on her assessment of the efficacy of her teaching while she was teaching rather than after when she added more explanation and more theory. The importance of a reflective thinking as an underpinning to effective formative assessment was again made evident through this case study, as it was in the D'Arcy Road study. In summary this teacher:

- exhibited a problem-solving approach to student learning *and* to their own teaching.
- -manipulated her classroom organisation to collect information on student learning.
- uses a variety of questions directed at articulating the processes behind her own thinking. She asked questions that required pupils to do the same.
- made moves to develop a collegial relationship her pupils.

Development of Research Ideas

From this case study, a new category relating to feedback has been added to the analysis. Some feedback comments by the teacher connected new concepts and learning to other concepts the pupils had studied or discussed. Making connections, finding similarities between learning tasks and relating them to real life examples are elements of this feedback. The teacher explained the connections explicitly and engaged the students in the generation of more examples of connections as part of her feedback.

Secondly, as a method of gathering data on the communication of criteria for achievement, interviews of children about their work will be added to the data collection schedule at the next case study setting. Children will be asked how they know their work is good. New categories may be added following analysis of those interview transcripts.

Chapter Six

Holy Name Church of England Primary School

Holy Name School is a grant-maintained Church of England primary school, located within a short distance from Alexandra Primary School. It is a small school with a central building constructed in 1876. There are several newer buildings attached to the central structure. There were 176 children attending the school from ages five to eleven at the time of data collection. The school is very multi-cultural. A third of the pupils in every class speaks a language other than English at home. The school is organised into one reception class, two mixed-age and three single-age classes. The school is overseen and directed by a Church of England governing body. The governors evaluate the school and write an annual school report for parents. The head teacher is responsible for reporting to the governing body.

School Context and Assessment

Information on Assessment from the Head Teacher Interview

The head teacher, Donna Barnes, had 25 years experience in education including 11 years as head teacher of the school. She said in interview that she had been very supportive of the move to the National Curriculum as a means of increasing the accountability and professionalism of teachers. She felt her decisions about school budget and curriculum needs would be reinforced by the requirements of the NC and she would have "less explaining" to the school's Board of Governors. She was, however, particularly concerned about the overloading of the curriculum and the move to more subject teaching. Her teachers were all wary of this and worried about the fate of project or topic work as a fundamental method of teaching. In the 1992-93 report of the head teacher to the governors, she wrote, "The teachers plan the approach to the curriculum by class projects, which are based on the

National Curriculum and the child's own experience. The basic learning skills are essential, but should not be taught in isolation... As demands of the National Curriculum increase, teachers wonder how much longer we can sustain the project approach. Will we be teaching subjects in isolation?" (See Appendix 6.1)

Ms. Barnes saw her role as a facilitator in the school and delegated a great deal of the curriculum and assessment work to her deputy head, Ned Martin. The head teacher felt her work was complicated by the power of the Governors of the School, whom she had to keep informed of all changes made in the school. In interview, she expressed concern that the governors had many opinions but very little understanding of the workings of a school. Her diary was full of appointments and meetings with the governors. The Governors' Report for 1991-2, for example, indicated that the board (with 11 members) visited the school 6 times during the year and visited each classroom. This was a level of bureaucracy with which the other head teachers in this research study did not have to cope. The National Curriculum would be helpful to grant-maintained schools, she felt, because schools and teachers would have less interference from boards about curriculum and evaluation issues.

School Assessment Policy

The first draft of the Holy Name Assessment Policy was written in February 1993 by the Year Two teacher, who also had the role of assessment co-ordinator for the school. The policy indicated that assessment should play a part in both teaching and planning. "Assessment should be linked to planning and learning intentions and should enable teachers to match pupils' needs." (See Holy Name Assessment Policy Appendix 6.2) Related to planning is the issue of National Curriculum coverage. The policy stated that over the course of the school year, each teacher is directed to highlight the sections of the curriculum covered by the class in the "Holy Name School National Curriculum Coverage Booklet". The booklet was designed to show what had been taught, but did not

indicate progress or achievement. Achievement was to be reported through the completion of several parts of the Primary Learning Record (PLR) which had already been in use at the school before the advent of the National Curriculum. To better plan for a pupil's progress, the school policy also recommended an early September parent-teacher conference for each child, to discuss the child's learning needs and to discuss how the pupil may have settled into the new class.

The policy also specifically outlined the school's adoption of several formative assessment "tools". Each core subject required a "Diary of Observations" to be used by the classroom teacher. He or she was to "make notes about the children's progress, abilities, concepts understood, concepts not understood, particular strengths and difficulties. We would insist upon a Reading Section of the Language Diary completed regularly using a piece of A4 lined paper inserted in the diary for noting books read to the teacher and comments made, leaving the blank space on the form for general comments on progress." (See again Appendix 6.2) Sampling student work was also highlighted in the policy, to be used especially for writing but for other subjects as well. Samples should be collected at least twice a year so that the "teacher will be able to review the children's progress and have evidence of that progress." A "Best Works" portfolio was required to keep a record of student achievement. Work in the folder was supposed to be frequently changed. "Each child will be involved in the selection process throughout the year, and will also be involved in the mounting, positioning and labelling of their work on their page at the end of the year. These pages will be passed on to the next teacher. In Year 6, the pages from previous years will be joined together to give each child a portfolio of his/ her progress through the school. "

This was the only school in the research study which outlined several specific formative strategies in some detail in their assessment policy. The year two teacher said in interview he had done much work on his own to find out about

these strategies but said that he had experienced difficulty implementing these ideas within the school.

Assessment Co-ordinator Information

According to Neil Martin, the year two teacher, who was also the assessment coordinator, Holy Name had been given very little effective in-service training on assessment and evaluation by the LEA. The teachers at Holy Name felt they had to learn how to cope with the new curriculum and the reporting procedures on their own. The deputy head had been the SATs Assessment Co-ordinator since 1991 and he had conducted the SAT assessments in his class. As assessment co-ordinator, Mr. Martin had provided a series of meetings on assessment in the 1993-4 academic year. The topics for these meetings included: a review of the Primary Learning Record, an in-service talk on new reporting procedures to parents, the use of the Modberry book for Curriculum coverage and a discussion of the new Record keeping papers from the LEA. There was also a meeting to explain the use of work samples, the moderation process and portfolios.

The assessment policy of the school indicated that teachers in the school were expected to include several important strategies and tools for conducting assessment within their classes. The curriculum co-ordinator was a full-time year two teacher and deputy head of the school, a fact which in his view, greatly limited his time for teacher mentoring or support. The real issue for him was implementation of the policy, and helping teachers integrate strategies into their work. According to Mr. Martin, this was not being done very effectively. He felt the head teacher had not provided the impetus necessary to motivate the teachers to try new practices.

School Context

Results from Questionnaires

Table 6.1 Results of Teacher Questionnaires (N=7)

Part A- Assessment Practices

Rate each one on a scale of 1 to 5 to show the importance you attach to the activity.

Assessment Practices	Most Imp			Least Imp	
	1	2	3	4	5
Close Observation of a child working	3 (42.9%)	4 (57.1)	0	0	0
Questioning during a task to see if a child understands	6 (85.7)	1 (14.3)	0	0	0
Questioning at the end of a task to evaluate the success of the lesson	2 (28.6)	3 (42.9)	2 (28.6)	0	0
Questioning at the end of a lesson to reinforce the main concepts	4 (57.1)	1 (14.3)	1 (14.3)	1 (14.3)	0
Giving verbal feedback to a child about the quality of his/ her work	5 (71.4)	2 (28.6)	0	0	0
Giving written feedback marked on the work	1 (14.3)	2 (28.6)	1 (14.3)	2 (28.6)	1 (14.3)
Deciding on levels and recording information about a child's work	0 (14.3)	1 (42.8)	3 (14.3)	1 (28.6)	2
Using SAT-type tasks or other standardised tests to support your on-going assessment	0	0	2 (33.3)	1 (16.7)	3 (50.0)

(N=6) (The Year Five teacher said he never uses this kind of assessment material.)

Discussion

These results indicate that the school rated verbal feedback and questioning students during a task as the most important assessment activities.

Questioning at the end of a lesson was also seen as very important by 4 of the seven teachers. Use of written feedback appeared to be more prevalent here than in the other schools, but its importance varied between teachers. Very few used SAT materials as a means of assessment students in class. One teacher noted this as “not applicable at all” to his teaching.

In this case study setting, close to 57 per cent rated deciding on levels as important (rating it as a 2 or 3) making summative judgements an important assessment function. As would be expected, the year 2 teacher completing SAT evaluations within two months of the data collection period, rated deciding on levels as an important (2) assessment activity.

Table 6.2 Results of Part B-Planning Source Materials.

 This question attempts to find the sources of the teachers' ideas for planning lessons. Teachers were asked to "Circle the most appropriate number where 1 is very useful and 5 is of little use to your planning."

Sources of Planning	Very Useful			Not Useful	
	1	2	3	4	5
Published work schemes and teacher handbooks	1 (14.3%)	2 (28.6)	3 (42.9)	1 (14.3)	0
Your own records and ideas from observing the child	3 (42.9)	2 (28.6)	1 (14.3)	1 (14.3)	0
National Curriculum Statements of Attainment	2 (28.6)	2 (28.6)	1 (14.3)	2 (28.6)	0
National Curriculum Support Material such as SEAC's Pupil's Work Assessed (Music teacher did not respond)N=6	0	0	0	2 (33.3)	4 (66.6)
LEA or school-produced plans (Music teacher did not respond) N=6	2 (33.3)	2 (33.3)	2 (33.3)		

Discussion

 This school's results suggested that planning is influenced by the teachers' own records and observations (71.5 per cent rated records and observation as 1 or 2 or very useful in their planning). This concurs with the fact that all the teachers rated observation as a very important assessment activity (rated 1 or 2).

 The teachers found Curriculum Statements as useful for planning as published work schemes. Three teachers rated work schemes as very useful and 4 rated curriculum statements as very useful. This contrasted with their use of

Curriculum support materials. According to the year two teacher, Holy Name teachers did not have access to these documents in their staff room and the INSET training had not made them aware that materials had been published to help develop teachers' assessment skills. They had received LEA plans and were attempting to use them for recording achievement.

Table 6.3 Results from Questionnaire Part C- Influences on Teacher's Assessment Practices (N=7)

Sources of Influence ranked 1-6 where 1 is the most important influence on teacher assessment methods and 6 is the least important.

Ranking by Teachers in the School						
Sources of Influence	1	2	3	4	5	6
Teacher Training	0 0%	1 14%	1 14%	0 0%	3 43%	2 29%
Experience In The Classroom	6 86%	0 0%	1 14%	0 0%	0 0%	0 0%
National Curriculum Requirements	2 29%	1 14%	0 0%	2 29%	2 29%	0 0%
National Curriculum Support Materials on Teacher Assessment	0 0%	0 0%	1 14%	2 29%	2 29%	2 29%
In-Service Training	0 0%	1 14%	4 57%	1 14%	0 0%	1 14%
Ideas ,Resources & Methods Learned From Colleagues at This School or Other Schools	0 0%	6 86%	1 14%	0 0%	0 0%	0 0%

Discussion

As in the other schools, the teacher's own experience in the classroom was rated the most important influence on his or her assessment methods. Rated at over 85% the number two choice, the Holy Name teachers have been influenced by classroom experience more than in the other schools. Colleagues were found to be

an important source of influence at this school. INSET was rated as a slightly less important influence. Again, this coincides with the results in the other schools. Since all the schools are part of the same LEA, this result seems possible.

Part E of the questionnaire asks teachers to consider their use of the National Curriculum Statements of Attainment for Planning, Teaching and Assessment. These results give more information about the issue of criterion-referenced curriculum materials and their relation to formative assessment practices. Specifically, the question probes the use of Statements of Attainment for planning, teaching and assessment. The data results also provide information relevant to the context of the year one teacher's assessment practice. These results were excerpted from the questionnaire. The results of the sections of the questionnaire most related to the research question on criterion-referencing have been tabulated as follows.

Table 6.4 Results of Use of the Curriculum

E. 1. a) Use of Statements of Attainment (N=6) "I use Statements of Attainment to plan my daily lessons."

	Mathematics	English	Science
A Lot	2	3* -	3
A Little	3*	2	2*
Never	1	1	1

*The asterisk denotes the Year One teacher's response.

Discussion

All but one teacher in this school used the curriculum Statements of Attainment in their daily planning. This indicated that the statements were moderately useful in establishing criteria for learning.

Table 6.5 E. 1. b) Use of Statements of Attainment

“I use Statements of Attainment to decide on a child’s achievement.”

	Mathematics	English	Science
A Lot	1	1	1
A Little	4*	4*	4*
Never	1	1	1

* The asterisk denotes the Year One teacher’s response.

Discussion

On the questionnaire, the year two teacher reported “a lot” of use of Statements of Attainment to decide on a child’s achievement. This seems a likely result given that the SATs would be conducted with his class in the spring term. The year four teacher was clearly not happy with the curriculum requirements and responded “never” to almost all items on the Part E section of the questionnaire. Most of the teachers in this school reported a little or moderate use of the curriculum for deciding on achievement. This is a generally a summative assessment function although if used to determine whether a child should move on or have more practice or experience with a skill, it could be used formatively.

Table 6.6 E. 1. c) Use of Statements of Attainment

“I use Statements of Attainment to help diagnose a child’s strengths and weaknesses.”

	Mathematics	English	Science
A Lot	1	1	1
A Little	5*	5*	5*
Never	0	0	0

* The asterisk denotes the Year One teacher’s response.

Discussion

These results indicate that all of the teachers felt that they used Statements of Attainment a little or a lot to help diagnose a child’s strengths and

weakness. This suggested that the teachers were in some way trying to use the detail given in the Statements to inform their judgements about progress. The fact that all the teachers use the curriculum for this purpose indicated some degree of collegial interaction and a shared view of the statements' effectiveness for this assessment activity.

Table 6.7 E. 3. a) The Influence of the National Curriculum on Teaching
“My teaching methods and class organisation methods have been influenced by the National Curriculum.”

	Mathematics	English	Science
A Lot	3	3	3
A Little	1	1	1
Never	2*	2*	2*

* The asterisk denotes the Year One teacher’s response.

Discussion

The diverse results found in this section of the questionnaire suggested less agreement by the teachers on the level of change in teaching and class room organisation required to implement the National Curriculum. Half the teachers have been influenced at great deal by the National Curriculum but two teachers said they have not changed at all because of the new requirements. This indicated a split in the results in this school. Some have adapted their daily work a great deal, some have not changed at all. Interestingly, one of the “never” respondents was the Year One teacher. This results confirms data obtained through interview and classroom observations.

Table 6.8 E. 3. b) The Influence of the National Curriculum on Teaching

“My recording keeping methods have been influenced by the National Curriculum.”

	Mathematics	English	Science
A Lot	2 *	2*	2*
A Little	3	3	3
Never	1	1	1

*The asterisk denotes the Year One teacher’s response.

Discussion

All the teachers, except the Year Four teacher, felt that their record keeping had changed either a lot or a little since the implementation of the National Curriculum. The comments section shed some light on the results:

“My teaching methods have been influenced in that I am teaching in a more subject-oriented manner. I am also doing a great deal more whole class teaching.”

“Most [of my] record-keeping relates directly to N.C. achievement.”

My record keeping has changed, “ by adopting similar language (terminology) to describe and define progress.”

The Year Two teacher reported that, “ The NC is a statutory requirement which clearly defines the teachers’ responsibility and duty within each curriculum area. The NC dictates what should be taught to children and teaching methods need to be adjusted to this requirement (With regard to planning and assessment especially). Due to curriculum overload, and the subsequent need to reassess the NC requirements, it is necessary to exercise professional judgements on occasions.”

Teacher Background and Classroom Context

Janice Reed was in her early thirties at the time of data collection and had taught for six years. Before working as a teacher, she had trained and worked as a technical engineer. In general, Janice appeared to be a very quiet, soft-spoken person. She did not volunteer answers readily. The children in the class often had to strain to hear her voice, especially during circle time on the carpet. She had a very relaxed manner in class. For example, when a new student, who spoke no English at all, was placed unexpectedly in her class without warning, she simply laughed and said, "One has to be ready for anything in teaching." This was her first year at Holy Name school.

In her previous school she had done SAT activities and tests. She had specifically asked for a year one class "to avoid doing the SATs again". She expressed her opinion that children at this age "should not be tested". She said the results of the testing did "not tell her anything new" about the students, nor did she find the tasks particularly interesting. In interview the teacher said she used some materials from the SATs in class, and cited SAT materials including some photographs relating to weather and geography. She said the only in-service training she had been given about the curriculum was on the SATs. She said she had never received training on formative assessment at all. She reported that she likes to make her own "tick lists" to check what she has done. She said, "I like to have little conversations with the children to see how they're getting on." In interview, she said that her assessment is generally on-going and she has little to do at the end of the year except fill in the boxes on the report cards. She said she likes to listen to a child's ideas and ask questions to clarify what they think, but she does not like to change their ideas until they have done an activity. She said she wants children "to find out what they think" and discuss it with others.

Teacher Views on Curriculum and Assessment Issues- Questionnaire and Interview Responses.

In interview, the teacher said she uses the National Curriculum at the beginning of the term for planning. She commented on her questionnaire that she uses the curriculum for, “the initial planning of a topic, then for keeping in mind the goals I am aiming to achieve. Statements of Attainment are the backbone of what I teach.” On her questionnaire she also indicated that she refers to the Statements of Attainment a great deal for planning English or Language studies, but only a little for Maths and Science. She was not worried about planning science because she was trained as an engineer. At times she finds the NC “a pain” because the amount to be covered. She expressed the fact that there are too many subjects in the curriculum and some of the science is “too complicated” for the children. However, on the whole she has found the level one material in the core and foundation subjects “quite applicable” to the attainment of her students. She has found the English curriculum the easiest to work with because the strands are very clearly different from each other. Maths she claimed “too unwieldy”. In planning she reported that she sets the topic for the term with help from the curriculum and also from the children’s ideas. In this school, the teachers planned individually. This became clear one day when Ms Reed mentioned she was about to start a science topic on living things in the staff room, another teacher piped up, “ I’m doing that too and so is ____.” There appeared to be little whole school collaboration for planning. There was a curriculum co-ordinator at the school but this job seemed to involve ordering material and curriculum supplies, receiving support materials, and distributing information on curriculum to the others on staff. It did not seem to include co-ordinating topic work or whole school curriculum planning.

On the questionnaire, giving verbal feedback and questioning during a task to see if a child understands the skill, task or concept were rated the most important assessment activities to this teacher. (See Table 6.1) Close observation

and questioning at the end of a lesson, were rated very highly (2). Overall, the teacher had a score of 26 out of 40, but the on the first 5 activities which correspond to formative assessment, she scored 21 out of 25. Her summative activities score totalled 10 out of 20. From this report one can infer that the teacher reported her assessment skills to be largely formative in nature.

Her own records and ideas from observing the child were rated as her most important source of assessment information. Statements of Attainment, published work schemes and the planning guides produced by the LEA were all rated somewhat helpful. She said she had never seen any of the SEAC guides to assessment or any support materials at all. Her methods of making teacher assessments developed primarily from her own experience in the classroom. Collaboration with colleagues was the next important source. Her teacher training was ranked the very lowest in importance, and the National Curriculum ranked next to lowest. According to this teacher, the most important purpose for assessing a child is to motivate them to try harder. Diagnosing a child's progress was rated number 2 in importance and identifying those with special needs was rated number 3.

Very clearly in her questionnaire responses, this year one teacher expressed the fact that only her summative record-keeping has been influenced by the National Curriculum. This has changed "a lot" in all three core subject areas. In contrast, her teaching methods and classroom organisation have not been influenced at all in any core subject. These conclusions were supported by her interview responses and by the observations made of this teacher in the classroom.

In interview and in her questionnaire, she gave information regarding her on-going assessment strategies. She said she relies heavily on pupils' notebooks and work books as samples and to help her make evaluations for report cards. For on-going in-class assessment, such as deciding on a child's achievement and diagnosing a student's strengths and weaknesses, she refers to

the curriculum only a little. In giving assessment feedback, Ms. Reed said that she tries to give a variety of feedback to children and mostly asks them how they did their work. She said she tries to tell them what's better about their work and give them encouragement to try harder or finish more work. She said when she talks to the children during their work periods she stresses repeating the instructions, explaining the processes and dealing with problems as they come up rather than after the work period. For this reason she plans long work periods, up to an hour in length so that the children can start, receive feedback and complete a project or piece of work "in one go". She said that this also served to increase their concentration time.

Formative Assessment Practices

The Teacher in Action

Planning

1. Written long and short term plans are base on curriculum outcomes or requirements.

Data collected from documents revealed that the teacher used a school produced form for long term planning and her own form for weekly planning. (See Appendix 6.3) The long term planning sheet listed subjects, ATs, a section to list assessment strategies and evaluation of results. The documents are revealing in that they might suggest areas the teacher felt most confident to complete. For all the subject areas, excluding music which is taught by a music specialist, the skills and knowledge sections taken from the curriculum were completed, as were the corresponding ATs. The teacher had left the recording and assessment sections almost blank, and the evaluation sections completely blank. With reference to these documents then, the curriculum was important in planning but not in the teacher's understanding of assessment and evaluation. This finding is confirmed by her statement that Attainment Targets are the "backbone of what I teach". As will be discussed under the topic of assessment, the evaluation sections on the long term planning sheets were not completed or only partially completed,

On the weekly planning sheet (Appendix 6.4), the activities for the core subjects were given more space, with room at the bottom for all the other curriculum areas. Only the activities are listed; there were no ATs or learning goals listed, nor were there assessment activities. The plans did not include a schedule, nor did they reveal any changes in plans based on how the work had proceeded in class. There were no anecdotal notes of any kind written in the daily plans. This suggested that changes are not made as a result of formative

assessment strategies used in class. The information noted from her planning sheets seemed at odds with her views expressed on the questionnaire. The teacher said her most important source of feedback into planning are her own records and ideas from observing a child. From classroom observational data, it was seen that the teacher completed a tick sheet noting names of pupils who had completed specific work. She also made some lists with anecdotal notes on reading progress.

2. Adapts plans in response to emergent criteria

As has been noted, Miss Reed had a very quiet voice and did not talk as often as the other case study teachers. The transcripts reveal that the children at times responded to each other's comments at circle time or in response to the teacher's very brief questions or explanations. Perhaps because of this pattern of discourse, the pupils were not automatically directed towards "correct answers". Instead, the teacher listened to their suggestions and explanations. (This aspect of her teaching will be further discussed in the teaching sections of the case study.) While she did not write notes from the exchanges, it is clear that she did listen to the children, and did so very intently. However, when she was asked what she had learned about the pupils' learning from a task or conversation, she made comments including that "the children needed more time to finish the work the next day" or that "they didn't have a very clear idea yet" or that "more would have to be done" with this or that concept. The comments seemed somewhat vague, and may not have been representative of the reflections the teacher made about the lesson. However, it was difficult to collect clear evidence that the teacher adapted her lessons in response to emergent criteria; she did not make any notes on her lesson plans, nor did she change her lessons very obviously. She said she did keep "mental notes" of what needed more time and more tasks, which she disclosed when questioned by the interviewer at the end of lessons. In one follow up interview, after a maths lesson on money where the children had to pretend to buy lollipops, the teacher was asked several questions.

1. What concepts were you trying to cover?
2. Who in the group was learning the concept easily and well?
3. What would be the next lesson for that group?
4. How did you plan this task? What was the source of the activity?
5. What might you change about the task for the next group?

In response, the teacher gave these answers about the lesson.

1. I was trying to teach number bonds to 10 with a practical application of “what they have to do in their work books”. The task was also to introduce them to the idea of buying and selling and planning to use their money.
2. “V” and “T” understood the lesson very well but T spent all his money on the first lollipop so though he could add, he had not stretched his money to buy the most number of lollipops he could. He got it the second time round though. “A” did not understand about the pieces of money at all. She needed to do more explaining about the pieces of money before next time. She had to teach all the money first, which was not supposed to be part of the lesson.
3. “A” just needs more practice in the next lesson. The others can start using 2 pence and 5 pence to spend and buy. She would not put them in different groups because they can help each other.
4. She made the activity in teacher’s college for a practice teaching round and it worked so well she kept it going.
5. She said she would just explain the pieces of money more clearly in the introduction next time.

These responses indicated that the teacher was observing and assessing the children’s individual progress. She did not note her ideas anywhere on her planning notes or on anecdotal lists nor did she appear to modify her instructions or her task in any way to improve her teaching in the next group.

She did spend time checking to see who in the next group knew the names and values of the coins. However, since she was interviewed prior to the next group's lesson, her adaptations may have been due to the researcher's presence.

A key element of formative assessment is that information concerning the learner's understanding gleaned through teaching and assessing should feed forward into planning. This element of practice was not readily apparent to the observer.

Teaching

1. Discourse to elicit criteria specific to learning through questioning and feedback.

English

In a phonic lesson, the teacher asked two groups to make lists of "ch" words and draw small pictures of them beside the words. The teacher sat for extended periods of about 15 minutes with each group. She did not talk a great deal but observed their work. She used prompts and questions to keep them going.

T - What's that Thomas?

C - change.

T - ch change. Good- that's it.

C - my turn

C - Yep, your turn.

C - church

T - That's wonderful

C - I know how to spell church.

C - You can't draw it.

C - Me- me too

C - Christmas

C - No- that's cr.

T - No- it is ch- like Charlene

C - I know on ch, ch, chair

T - (she doesn't hear this)

C - chilli

T - green chilli?

C - no cold and chilly

C - chimley

T- No Chimney- that's another. (She has asked everyone in the group for an example) Put it in your own book. Don't worry about Keisha. Now what have we got? Let's read the list.

(Choral reading of the list) What are we going to write next?

The teacher routinely asked each member of the small group for answers. She sat with the group and checked all their work. She used the task, observation and questioning to find out about the understanding of the group. There was no evidence that this understanding fed into planning or future teaching. Of note also was that the noise level in the class made it difficult to hear because the teacher did not circulate to the other areas of the room during the time with the phonics groups. (See map of classroom, Appendix 6.5) The other 15 children were working on puzzles, handwriting and some books for 35 minutes.

Science

The teacher began a unit on "Living Things" with a whole class lesson. It was her intention to find out what the children knew about living and non-living things by having them work on a list as a first task. She was able to gather good information concerning their conceptual understanding of living and non-living things through this method. She later worked on the skills of classifying and sorting. The teacher said in interview that she does not like to tell her pupils the answers but rather creates situations where students discover the answers

themselves. She added very little theory to class discussions. She spoke very little and did not correct answers very often at this stage.

T - Can we make a list of living things on our board?

(She nodded to a very quiet child with her hand up.)

C - Lion

T - Allegra?

C - I said crocodile

C - Worm

C - Octopus

C - Goat (several others answer- a long list is developed)

(All the class is quiet)

T - Is that our whole list? Is it? Is our list finished?

Thomas?

C - Monkey (All quiet again)

T - How about cat?

C - Water

T - (she writes it down on the list) Yes, that is a possibility.

Charlene? Remember there's a tape recorder back there and we need quiet.

What would you say? Should we put that in? (No one is sure) Can you tell me something the same about all these things? What are they all?

C - Animals

C - and some people (both of these shouted out at the same time)

Opening framing comment . This marks the beginning of the session. Use of "we" as an expression of collegiality. The teacher often nodded at a child to indicate he/she was to speak. The pupils had to keep watch on her if they wanted to be asked to answer.

Teacher does not comment on the answers. She writes them down on a sheet of paper in the order they are given. It is noteworthy that the teacher does not follow up any of the these comments with an evaluate of any kind. She has not indicated in any way whether these items are correct.

Again, she does give feedback on the list that might be considered an evaluating comment, either approving or disapproving. She finishes by asking another question. She commented after the lesson that she had hoped some would add some non-living things. However, when she got these answers she did not categorise them differently in anyway. In other words, she did not model any kind of sorting process to help the children with working with the concept of "living " and 'non-living" things which follows in the lesson.

The teacher's comment does not refute the child's answer but her inflection of stress on the word "possibility" suggests to some pupils that this may not be correct. There is some whispering about this amongst the students, which the teacher felt necessary to stop.

Works on categorizing the list. She is questioning to solicit their thinking, but at this point moves to wanting a correct answer of some kind. The children understand her question and that it requires a correct answer but they cannot find the answer given the very long list of items on the sheet which include animals, plants and water. Some cannot read the list anyway, and if they were not listening carefully would not be able to attempt an answer at all.

(she clearly wants them to say alive but no one does.)

T - You can put your hands up and not shout at once. What's the same about all of these things?

C - There's lots of animals but not the people.

T - Lots are animals- are there anything apart from animals What else?

C - People

T - People are alive (she adds that to the list)

C - Trees

C - Flowers

T - (she speaks to one fidgeting child) Don't do that - not at the moment- put that away.

C - Flowers I said

T - Flowers yes.(she writes it down) We've got water here. Do you think water is living? Put your hand up if you think water is living? (many hands go up, many don't know, many just whisper)

T - Charlene, why do you think water is living?

C - Cause it's there for the trees.

T - No- Put your hand up if you know why... you don't think water is living. (Several put up their hands)

C - Because some animals don't like water and that's why.

T - Yes but we do- we like the water.- (to another child- Put that away- the teacher takes a pencil)

We need water to keep alive. Do you think the sun is living? Excuse me- one at a time. (Several raise their hands)

Why do you think the sun is living? (Silence--lots of thinking)

C - It's very hot--Dead things are cold.

T - What does this mean? Can you think about it? Do you think the sun is living?

C - The sun goes away in the clouds.

T - Yes, but do you think it's living?

C - No

T - No- it's not.

The list starts to go on again, as the children search for the answer she wants. Only four or five children are able to really engage in this process which has gone on for 13 minutes already. Some start to fidget but they do not talk. The room is very quiet and one can hear the traffic from the busy street down the hill clearly.

The teacher gives a yes to a respond which is really the first complete IRF sequence of the lesson.

She offers the opportunity to vote as a means of quickly soliciting everyone's view of living and non-living things. This proved to be a good method of gathering information on current thinking because it was evident most children had no idea about whether or not water is living.

The child indicates that water is necessary for life but the teacher decides not to pursue that line and re-directs the question to others. The open-ended "why" question aims to gather information on their thinking.

The teacher decides to add another element to be considered, given that the children have not been able to conclude the characteristics of "living" in the example of the water.

The teacher probes the answer of this child, trying to tease out some characteristic of living.

In the end she comes to a conclusion with the pupil, but does not give any theory or organising principle that could be used to apply to the other items on the list.

In this excerpt the teacher used questioning to gain an understanding of the children's ideas. It is interesting to note that she did not rely on the Initiation-Response- Feedback sequence of dialogue used so frequently in classrooms. Instead the teacher followed up her initiations with questions or asked other children to respond to what had been said. The result is a decidedly slower pace to a lesson. The teacher did not supplement the discussion with theory nor did she often give feedback on the comments made by pupils which might be considered an evaluation of their thinking.

She said in interview after the lesson that she knew from the discussion that the children did not really understand the term "living" but had a few ideas as to what might contribute to it. After the session she was asked, "What did you learn about the children's thinking from making the living things list with them?" She replied, "It's more difficult than I thought. You can see what they think. I don't give any answers then I wait until they've done more work." The teacher asked almost every one in the class for a suggestion for the list. In the second session, she also made use of the information she had learned the previous day to zero in the concept of living and non- living and the skills of classification. She relied on memory for this information, but the information she had learned had been fed forward into the next day's discussion. There were well over 25 items on the list. The teacher brought out the list a second day and began another whole class lesson by using choral reading to remember the list.

T - Let's get back to the trees. What lives in trees?

C - Birds

T - Yes that's right. Let's put a few marks beside the ones we're not sure about.

C - Not sure about the moon.

T - Yes, the moon and the sun and water.

C - Yes, but when you're in a car- and it's at night and, well you think that the moon is moving but it's not, yeh, you think that.

C - (another child) Yeh, it goes behind it.

C - Why does the sun and the moon, the moon and the sun you think that they are moving.

C - It is.

C - Then it's alive!

T - I think we'll have another chat about this later. We've got lots of living things and some we don't know about. Let's read the whole list again. (They read the list again.)

T - These are some of the things we are not sure about. (She pointed to sun, moon, apples and water which have ticks beside them.)

C - I'm very sure.

T - Well we weren't sure about them so we can put them separately. The ones we're not sure about we put them separately (She writes the names of the things at the other side of the page)

Framing move to open the lesson.

This day she has slightly changed her list-making procedure to include notations indicating items which might not be living. This appeared to help focus the children's attention on the characteristics which might be part of "living".

The result is that a child started to question the list and raises doubts. The teacher takes this partial answer and adds and modifies it to fit it to her own purpose. (Edwards and Westgate, 1987). The teacher listens very intently to the child and does not break in during the comment. She does not interrupt a child, even if the comment is sometimes off topic. She waits for the child to finish. The discourse follows between pupils, not back and forth from pupil to teacher for reframing or feedback and back to pupil. The teacher does not control or hold power over the dialogue, but shares in the conversation at times.

All talk--The teacher does not cut in for a minute. She looks at the clock and sees that the time for the lesson is over.

Again the collegial use of "we". The teacher summarises the lesson. She also comments on the method she has established to separate items which might not be living from the others. She models the use of a second column and reads out the names of the items as she does so.

Though the teacher, even in this second session, did not give any criteria for being alive, she said she felt they were getting 'closer'. She had begun sorting the list and let them continue to debate the characteristics of living. The teacher was a very careful listener. Through this technique she created situations where students talked to each other in her presence. The teacher said she learned a lot from this. This strategy also appeared to create a sense of shared power in the classroom which enabled the children to tell about their ideas without feeling they would be evaluated by the teacher.

2. Use of modeling or guided practice in tasks

Maths

The teacher modeled an activity first before students at a group table tried it. The children were adding money to various amounts totalling under 20 pence. The teacher said she developed this activity during a pre-service training and has used it frequently. She said she had not changed it much over the years. The children were given a number and asked to find three ways to add up to that number. The teacher demonstrated once and then gave money to the four children at the table. She gave them all the same number- 9 pence- at first. The other children in the room were working in SPMG math workbooks at their tables. The teaching here involved guided practice, modeling and some questioning.

T - So what coins can we use to make 9- which coins can you use?

(Teacher picks up a 5 pence to start.) What are we looking for?

C - (looks at the 5 pence and slowly picks up a 2 pence, then another. The teacher puts them altogether)

T - Yes--See it's not bad adding up 3 numbers is it?

C - I can do it.

The teacher repeated the task instructions often. She very often used the term “we” when approaching a task to enhance the collaborative approach to learning. The teacher also named the concept or skill being learned. Here, she tells the student that he has tried adding 3 numbers.

In another lesson the teacher used modeling and questioning to gather information on the concept of money. The children were using coins to add up to ten and then used the coins to buy the most lollipops possible. There were different sizes of lollipops on the table, some labelled 2 p, some 5 p, and some 10 p. In a small group of 4 children, the teacher introduced the concept of money and buying. The teacher took out a box of money.

T - First of all, real money is better to use. You can hold on to it.

(She hands each one a 5p.) V- Can you find a 2p?

C - A 5 p?

T - I gave you at 5p (The child searches for a 2p.). See if you can help her (to another child in the group).

C - (another boy) I found lots of 2ps.

T - (to the child still searching) Can't you find one (It becomes clear the girl does know what a 2 p looks like.) What about the 5 p. Can you find one that's silver? (The girl picks up a 5 p) Does it say 5 pence on it?

C - There's a 5- can't see any number.

T - what colour is the five pence?

C - Silver. (The teacher checks that everyone has the five p and is listening. She decides to go over all the money and the values before starting the game.)

The teacher focussed on the one student having difficulty and added a lesson about the value of the coins after her questions revealed that the concept was not clearly understood.

3. Use of student or expert exemplars

Science

The children had been developing their topic of living things into a project on animals. They were looking through books to find information and pictures on their chosen animal and putting it together in a small book of their own. The teacher had given them several questions to answer including where the animal lived and what they liked to eat. She did not write these instructions down on the board but repeated them often. The assignment was challenging to many because not all the information books were at a first year reading level. The children had to use picture cues a great deal. The teacher used no exemplars or modeling of the assignment to convey the criteria for achievement. She repeated the instructions to the whole class and then to individuals.

Summary to Teaching

In previous cases studies a question arose as to whether or not children had assimilated the criteria specific to learning through the teaching strategies. An additional interview with children asking them to talk about their work was added to the data collection. The assignment on animals and living things was used to collect data on whether or not the children had understood the expected criteria for achievement. They were asked to explain what they had to do and to discuss the quality of their own work. (The " I " in the transcript indicates the words of the interviewer.)

I - What animal did you pick?

C - Polar Bears.

I - Oh...mm. Do you know what you have to do Thomas? What did the

teacher say you have to do.

C - Draw them.

I - Draw them. I see. Anything else did she say? Or you just have to draw them.

C - You have to write them.

I - What do you have to write?

C - I don't know.

I - Do you know?

C - Write about the animals.

I - What do you have to write about the animals?

C - What they do and what they eat, and what they drink and how they make noise and...(inaudible)

I - And how they what?

C - How they catch fish?

I - mm (to another child listening at the same table) And do you have to do the same about hedgehogs?

C - No, because you write about it and things.=- Here (pointing to his own page) is where you have to write it.

I - (To everyone at the table) Where do you get the information about it?

Where do you find out about, say hedgehogs?

C - Here (he points) in that book there.

I - And can you read that book?

C - (shakes his head no)

I - So what do you- can you find out, where do you look, to find out ..where do you look? Is it in the book?

C - in the pages

I - in the pages? (points to the writing and then the pictures) Do you look

here or here?

C- The pictures (looks at the interviewer as if this should be obvious)

In this exchange the children appeared to have an idea of the expectations of the assignment and generally how to proceed with the work. They did not volunteer the whole process unless questioned carefully. The teacher came around then to check the work.

I - (to a child with the teacher listening) Is this pretty good work?

C - mm (thinks) I'm good to put in what it uses every day.

T - Let me see your book. Is this the polar bear?(she says to another child)

C - Yes--The waters are so deep there. (He points proudly at his drawing)

The two students focussed on two different aspects of their work. The first thought the work was good because she had put in what the animal used everyday, which was something the teacher had not asked for in the general instructions. The second child commented only on his picture, possibly because the writing was unfinished.

English

In language, the children had handwriting booklets they could access but the best works portfolios with other samples of their language activities were not in the class. Several groups of children were therefore asked to look through their handwriting booklets and talk about their best page. The transcripts were analysed for comments which might indicate that the student understood the criteria specific to achievement in handwriting as a result of the teacher's use of

guided practice or use of examples and modeling. This interview took place with three girls.

I - What's your best page?

C - All of them.

I - (interviewer turns the pages) All of them! Which show--hey this

one is not good because it's not finished! (all laugh) Show me

one that is really, really good.

C - A,B,C

C - oh no.

I - Show me the best page.

(All three are still flipping through the pages)

C - I know which one is my best page.

I - Why do you think this is your best page?

C - I used a ruler.

I - How do you know it's good?

C - It's got a rainbow. -

I - You like the picture?

C - I like all the pictures?

I - Is there anything else that makes this good writing?

What makes the writing good?

C - You do it carefully.

I - Oh carefully. What makes this good-the letters?

C - They're a bit straight.

I - Straight?

C - and this part is going off a bit.

I - (pointing to the letters) So this one is good and this one is not so good?

C - Yeh- it's good up to z.

I - Which is better, big writing or little writing?

C - Big writing

C - I like big writing.

C - I like small writing.

C - I like yellow writing.

I - Big writing is good? It doesn't matter if it's big or little is that right? Does the teacher tell you what is good writing or not?

C - yeh.

C - She says do it straight across.

C - So you can read it.

C - Yeh, so you know what that says.

C - (Points to one page) It's closer to the line and a nice space.

I - oh--Close to the line, straight and nice spaces. Did the teacher tell you that? Did she?

C - She writes it on a piece of paper.

I - She does. She give you an example? She shows you what to do?

C - Oh yah!

C - Then we do the pictures.

C - We copy.

C - No, we do whatever you like.

The children were able to list at least three criteria for good handwriting. It must be straight, on the line and the letters must be spaced. In teaching handwriting, the teacher gave them an example to be followed. From this exchange it seems that she has told them about straight letters with "nice"

spaces. She has communicated to them that the point of writing is that you can read it. One child also had the idea of using a ruler to make the lines on the page darker and easier to write on. She did not say whether the teacher had told her to do this. Few of the children had these lines in their books They were not sure about the size of the letters. The children have some idea of the process for doing handwriting especially the fact that the pictures had to go with the letter. Overall, these children had an understanding of some of the criteria required for successful handwriting.

Assessing

1. Feedback

As in the previous case studies, the Gipps/Tunstall (1995) Typology of feedback, found in teaching and assessing ,was used to sort and analyse feedback samples.

Type C Feedback

English

When reading alone with a child, the teacher gave the pupil feedback indicating the criteria required for achievement.

T- You're coming along, You sounded out really well.

The teacher gave specific praise to the student articulating in some way the skills in sounding out which contributed to the success.

During writing practice a child's paper kept slipping off the desk.

T-You've got to hold the paper at the same time. (She puts his left hand on to the paper and presses it down slightly. She adjusts his chair at the same time)

Here the teacher is correcting errors but also giving specific suggestions for improving the writing.

In the next example, The teacher provided additional criteria for the work to be successful. She also modeled how to find the answer. Later in the passage, she corrected errors, another element of Type C feedback.

T - (Reads over the work) Good. Have you got something about what it eats. What does the hedgehog eat? Can you find out what it eats?

C - No

T - Go and see, look in the book to see what it eats. (She picks up the books and puts her finger under the words to find the worm eat. Then she gives the book to the child who carries it to his desk. He comes back a few minutes later.)

T - Ah- What hedgehogs eat (it is a heading in a book)

C - But I already know.

T - No you don't. You must look in here (points to the book)

C - It eats bugs (the child cannot read the difficult text)

T- No- you see it's worms.

Another child pipes in.

C - earth worms it eats.

T - It says. (she reads aloud). "Earth worms are the hedgehogs main food." They like them best of all. So do you want to write what they eat down?

On several occasions, the teacher would just watch the child at work and then go and get some counters or a manipulative material, put it at the child's table to use, point to a few incorrect answers and then smile. Although there was no speech, this was still considered to be corrective feedback.

Type D

There were few examples of Type D feedback. In this sample, again from English, the teacher provided Type D feedback by helping the student to

articulate a problem and models problem solving strategies. There is a discussion of strategies that might help in developing the work.

T - Are you having a problem?

C - Yeh

T - What's your problem?

C - That bear doesn't fit there. They're all too big.

T - What about this one there?

C - It won't work.

T - Well, don't worry if it's too tall. Just have a try.

(Teacher sits down to help arrange cut-out trees on the page. She gathers all the bears and systematically tries each one in various positions. The child tries to help. Some of the bears are too big and so the shapes go off the page. The teacher starts handing the bears to the child to try. She does not talk during this work. She is distracted for a moment by another child coming up to see her for help. She then picks up the smallest bear.)

T- Have you tried this one too? (She stands up. She speaks to the other child.)

Just draw the easiest one for now. (She then looks back at the first child.)

C - Yes, but.. (She puts her head in her hands) I've tried them all.

T- You've tried them all? (She picks up another quite small one.) Have you tried him too?

(The child has traced several to see if they can fit together.)

Just show me how you try it

(The child traces it and then starts to rub it out.) Will you try and do it without rubbing out? Just do it and show me a nice picture of a bear. (She moves on to the next student.)

2. Metacognitive questioning into processes and products.

The Year One teacher used several of the methods seen in other schools to create opportunities for gathering formative assessment information. Miss Reed asked a group to explain and discuss their work to the whole class on several occasions. However, she did not ask each person to explain a part of the work, nor did she use the situation to give the students improvement feedback as to what could be done next, or how they might improve the work. Her questioning techniques were different from the other case study teachers. She was observed to avoid the IRF pattern of discourse sequence and replace it with following a response with another question. She, at times, simply waited or directed the pupil's response to her question to another pupil for comment. She gave the other pupils a chance to ask questions of her, but her methods did not always include evaluating feedback. Her listening skills tipped the balance of discourse away from teacher-talk to a more equal balance of talk between teacher and pupils. This was also different from any of the other case study teachers. It should be noted that her pattern of discourse required a slower pace in the classroom and more time for each lesson than was observed in the other case study classrooms.

3. Communicate, collect and record achievement information.

Although the teacher collected samples of student work through projects, portfolios and workbooks, there was not a great deal of evidence to show that she used these materials to communicate achievement to the pupils. On her planning sheets for the term, it was important to note that, for the previous term, the recording and assessment areas, were only partially completed. The teacher listed the collections of work found in topic folders, class

books and published math booklets as her major sources of assessment information. In Maths she also listed “verbal” and “display” as assessment strategies but there was no elaboration as to what this might be or what specifically she found out. The Evaluation section, which was put there, according to the assessment coordinator, to indicate whether the children have accomplished their learning or not, was not completed at all. Whether she did not feel it a priority to complete these records or did not know what to fill in, is not clear.

4. Informal and formal observation

(See use of tasks and tests below.)

5. Recording information- i.e. anecdotal notes

The teacher kept anecdotal notes on reading progress. (Appendix 6.6) She listed the date, book read and some brief notes on the strategies employed by the child to read the text. Some examples include. “good 1:1, self-correcting, recognized some words, recognized repetitive words, uses phonics very well.” She kept the pages in a binder which she used during book time after lunch. At times she commented on the child’s opinion about the book. The notes were not used to give feedback to the pupil. However, the teacher did make general positive comments to them at the end of the reading. The teacher relied on the math workbooks and the science projects for data on current achievement in Science and Maths.

6. Using tests or tasks

The Year One teacher noted in interview that she did not believe in formal tests or assessments for primary children and had changed schools in order to avoid doing the SATs again. The teacher used a variety of performance tasks in her class and spent time observing children as they worked. She allowed work periods of up to one hour or more several times a week in order to provide time for more in-depth work and work completion. Her formative assessment of

the pupil's processes, concepts and skills appeared to take place most often through these observation periods.

7. Portfolios developed with and by learners

Ms. Reed said she used work folders or portfolios only because "it is a requirement". The school assessment policy indicated that portfolios were to be updated regularly and that the pupils should be involved in selecting and changing the work kept in the folder. The teacher had not used the folder in this way, rather she placed work there which she felt best represented development in the student and was used at the end of the end to evaluate achievement when the teacher was preparing final reports. The data collection period took place in the spring and the teacher said she hadn't had time to put in any new work since January. She said she would have to give the student time to "finish their portfolios" so that they could be passed on to their Year Two teacher in July. As a result, it seemed apparent that the portfolio was not used formatively by this teacher. It appeared the Best Works portfolio idea from the assessment co-ordinator had not been implemented as a formative tool but as an end of term project. (See photos Appendix 6.7)

Conclusions to Holy Name

Sources of Influence on Teachers' Formative Assessment Skills

1. The Year One teacher indicated on her questionnaire and in interview that only her summative record-keeping has been influenced by the National Curriculum. This has changed "a lot" in all three core subject areas. In contrast, her teaching methods and classroom organisation have not been influenced at all in any core subject. These conclusions were supported by her interview responses and by the observations made of this teacher in the classroom. This was the teacher's first year at Holy Name which might

explain the fact that she had not yet assimilated all the strategies and policies of the new school.

2. The head teacher and the curriculum coordinator had not supported her in the development of new practices. In the case of the Head teacher, data from interview suggests that much of her time was absorbed in matters relating to school administration and responsibilities to the Holy Name Board of Governors. The head was not seen as an influence on formative assessment skills either by the year one teacher or the other staff members.
3. The year one teacher's training for assessment was rated the least important source of influence on her practice while her own personal experience in the classroom was rated the highest influence.
4. As seen in the other case study schools, the curriculum was most important to her long term planning and she was very familiar with the Attainment Targets and the Statements of Attainment. Her interview data, questionnaire responses and her planning documents all confirmed this finding. The curriculum was important to her; this teacher was the only teacher who carried sections of the curriculum with her in her day book. Nevertheless, she did not appear to use the curriculum for daily planning or assessing. This finding is supported by her questionnaire and interview responses.
5. The assessment co-ordinator's concern that the Holy Name assessment policy had not been fully implemented was supported by the practices observed in the year one teacher's class. Of the list of practices included in the assessment policy, the year one teacher had added the anecdotal notes for reading progress. She had not made formative use of the portfolio as it had been explained in the policy, she did not complete assessment or evaluation records for long term planning and she did not make anecdotal notes in a Diary of Observation.

6. As in the other schools, the staff at Holy Name rated the teacher's own experience in the classroom the most important influence on his or her assessment methods. Rated at over 85% the number two choice, the Holy Name teachers have been influenced by classroom experience more than the staff of the other three schools. Colleagues were found to be an important source of influence at this school. INSET was rated as a slightly less important influence. These results are similar to the ratings of teachers in the other schools. Since all the schools are part of the same LEA, this result seems predictable.

Summary of Teacher's Practice

Planning

The Year One teacher felt the curriculum was moderately important to her planning but did not develop new tasks or assignments to co-ordinate with the curriculum requirements. Little evidence of adaptive strategies was observed other than giving pupils more time for completing work and discussion.

Teaching

It was evident in the children's ability to articulate criteria for excellence that the teacher used talk to demonstrate criteria specific to learning. However, her verbal interactions were fewer and followed a different pattern than all the other case study teachers. The discourse did not follow the more common pattern of turn-allocation where the teacher asks a question, the student replies and then the student response is followed by the teacher again Mehan (1979). In this class, pupils responded to other pupils' comments. These initiatives were welcomed by the teacher in small group and whole class lessons.

Of significant interest in this case study was the fact that the teacher was an astute listener and observer. This provided the teacher with a powerful formative assessment tool if she had been able to use her reflections about what

she had observed to adapt her teaching and planning in response to it. The class discussions gave her good information on their conceptual understanding because she was able to facilitate talk between pupils. It was evident that the teacher made some use of modeling and guided practice, especially in teaching handwriting. It was also used in working with maths especially in using manipulatives for computations and problem-solving. The teacher made little use of exemplars. At times, she showed a student's work to the class but she said in interview that she would never make her own product as an example for others to follow.

Assessing

The teacher used workbooks as samples of student achievement and as clues to the processes used to complete the work. Portfolios were not used for formative purposes. The teacher used portfolios only for summative purposes, despite a clear description in the school assessment policy of how portfolios could be used to encourage students to self-evaluate their work and understand the criteria for achievement better. The teacher used feedback to correct errors and specify achievement. Individually, she gave feedback to students relating to the use of criteria for work or processes. There was however, no evidence of feedback which connects new ideas to ones previously experienced as seen in the practice of the Alexandra Year One teacher. However, connections between ideas were made by students. This was possible because the teacher's quiet manner and listening skills encouraged the students to react to each others' comments. The teacher did not make use of standardised or performance assessments integrated into topics and teaching. She conducted informal observations but did not use anecdotal notes to support her ideas. The teacher did make notes on reading progress, but did not communicate the feedback to the students at the time.

Chapter Seven Conclusions and Analyses

Influences on Formative Assessment and Overview of Case Study Teachers' Observed Practices

Introduction

The impetus behind this study into the processes of formative assessment was the advent of the British National Curriculum and its assessment arrangements. Curriculum designers intended to include in the new National Curriculum in Britain and Wales, what was known of best practice, content, and theory of learning, though they worked under the conflicting intentions of a government who desired a curriculum of accountability and centralized control.

This case study research project took place in 1994 within four schools in the same LEA, after primary teachers had worked with the National Curriculum materials for two years. The research focus was narrowed to Year One teachers at the primary level. Cross-case analysis of questionnaires and case study data from all four schools provided information for the development of a model of formative assessment and towards understanding of the influences most significant in developing formative assessment skills. This was done to provide a wider sample and therefore a richer description of how the practices of teachers came to be, and also to direct future research into the ways and means of enhancing formative assessment practice. One of the case studies descriptions was placed in a separate appendix (See Appendix B) for reasons of thesis length and because its content did not lead to the development of the model.

The study also attempted to describe the strategies associated with formative assessment as realised within the complex social world of the classroom. While the methodology used in this research is described more fully in Chapter Three, a brief summary of the process is recounted below.

In the first stage of the research, I analysed the curriculum materials in conjunction with the interview data I collected from three curriculum writers. This was done to understand the ways in which their intentions to improve teacher assessment were incorporated into the National Curriculum design. Interviews took place in 1993 and 1994. Research instruments, including questionnaires, were developed and tested in a pilot for the study. As a result of the pilot, the research setting changed from a year long study in one school to several weeks of data collection in four schools. This was done to describe a wider range of practices than those which could be observed in a single school setting, and to understand the links between strategies involved in the planning, teaching and assessing phases of teacher work.

The initial review of literature took place in 1993. However, a new understanding of the strategies involved in conducting formative assessment has developed in the literature over the past five years. In particular, relevant research has provided information concerning the setting of goals and criteria, the role of feedback in learning, and the importance of discourse in the process of constructing knowledge and communicating achievement. The case study analysis was completed taking account of recent research as a means of refining the description of practice. Contextual data from the school was collected through use of questionnaires, structured and semi-structured interviews, documents and observation. The questionnaire and interview responses were used to answer the first two research questions. The two questions examine the sources of influence on formative assessment practices.

The case study data was analysed qualitatively to group or cluster formative strategies, including the teacher thinking required by those strategies, to uncover the ways that formative strategies might be linked or integrated into planning, teaching and assessing. After analysis of the data from the first two case studies, an initial model of integrated practices was designed. This model was then questioned and further refined through the analysis of the formative

assessment practices observed in the final two case study settings. In this way, the research was grounded by the process of constant comparison across the four case study settings. The model that emerged (See Figure 8 .1) accounts for the understanding of integrated practice as it was observed in the four settings. The research results represent the observations and findings from these settings only. However, the findings provide information on the influences that develop and shape teachers' practice of formative assessment; knowledge especially important to those interested in improving teacher assessment skills. The research also contributes to the understanding of formative assessment theory and especially its practice, as it occurs in the real world of the classroom.

Structure of the Chapter

In the first section of this chapter, the findings relating to the influences on teacher assessment practice across all four case study schools are summarised. (St. Michael's case study report can be found in Appendix B.) The results respond to the first two research questions. Each research question is followed by tables showing the cross-study findings and a discussion of the results. The small number of respondents precludes the interpretation of the results as statistically significant, however the results do suggest the understanding and opinions of teachers working in this particular LEA.

In the next section of this chapter, a summary of practices employed by the four case study teachers is provided. These results respond to the initial part of the third research question. It should be noted that the ways in which assessment strategies were linked or integrated into practice is discussed in Chapter Eight.

To begin, the three research questions are given.

1. What sources of influence have contributed most to the teachers' formative assessment practice; curriculum, in-service training

- (INSET), colleagues, head teachers, training and / or experience in the classroom?
2. Did the teachers use the Statements of Attainment given in the National Curriculum for formative assessment purposes? Did they use the Statements of Attainment for other purposes in their work?
3. What formative assessment strategies are practised by the four case study teachers? In what ways, if any, are formative assessment strategies integrated into the planning, teaching and assessing phases of the teachers' work?

Sources of Influence (Research Question 1)

The responses of the questionnaire provide a more detailed look at the sources of influence on the formative assessment practices of all 26 teachers in the four case study schools.

Table 7.1 Table on Sources of Influence (N=26)

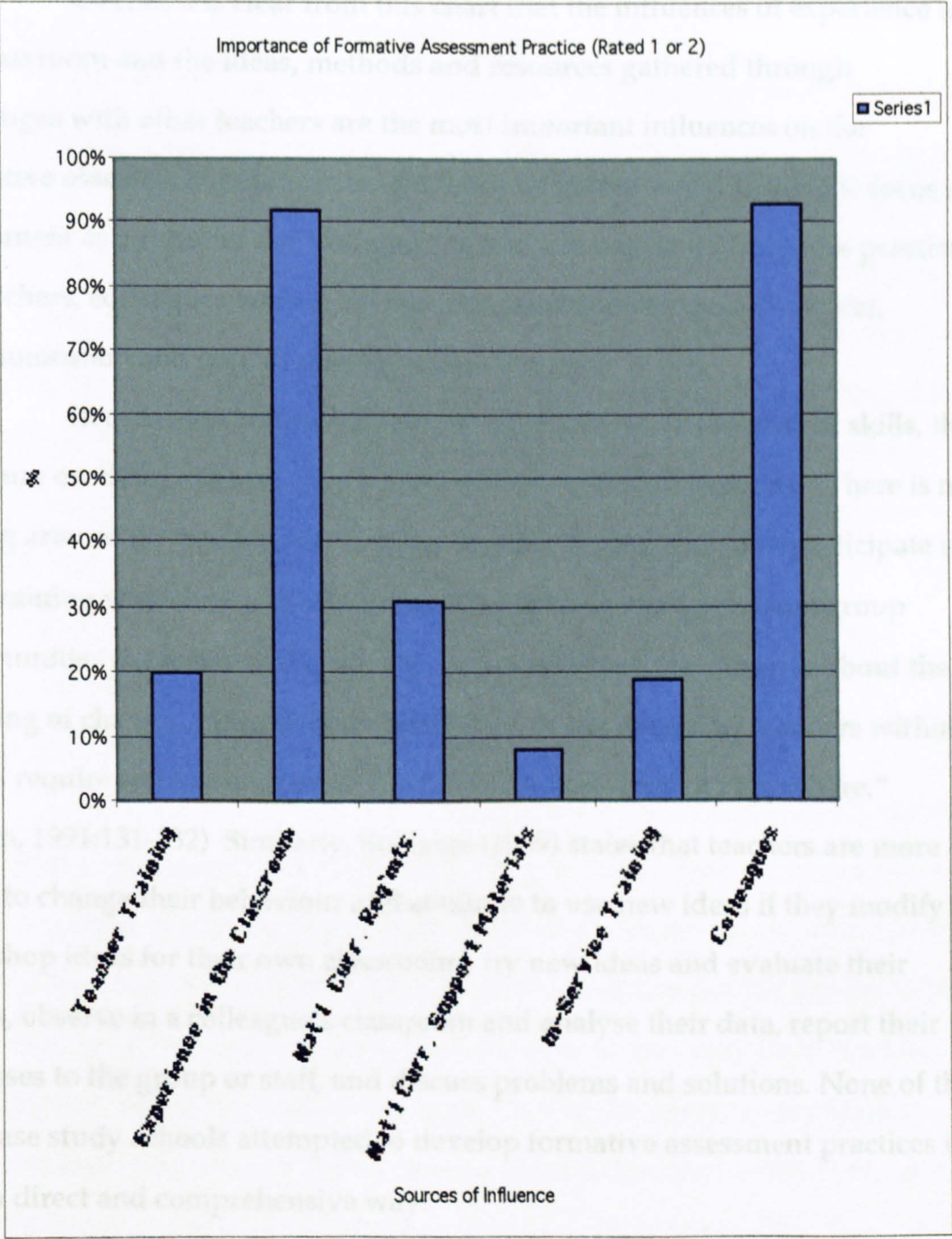
Ranking by Teachers in All Four Schools						
Sources of Influence	1	2	3	4	5	6
Teacher Training	3 12%	2 8%	7 27%	3 12%	4 15%	7 27%
Experience In The Classroom	20 77%	4 15%	1 4%	0 0%	0 0%	1 4%
National Curriculum Requirements	3 12%	5 19%	6 23%	8 31%	3 12%	1 4%
National Curriculum Support Materials on Teacher Assessment	0 0%	2 8%	7 27%	4 15%	5 19%	8 31%
In-Service Training	0 0%	5 19%	12 46%	3 12%	1 4%	5 19%
Ideas, Resources & Methods Learned From Colleagues at This School or Other Schools	9 35%	15 58%	1 4%	0 0%	1 4%	0 0%

Discussion

Overall, these results must be interpreted with the proviso that the teachers may well have had varying degrees of understanding of formative assessment. However, this questionnaire item followed two sections which outlined the specific practices linked to formative assessment, and that by completing those sections first, the hope was that teachers would be given a more common understanding of the intent of the questionnaire item on sources of influence on assessment practices. In general, the teachers' experience in the classroom and the influence of colleagues appeared to be the most important sources of influence. The table also indicates those sources considered the weakest influence on practice. Of interest is the low rating of teacher training in the area of assessment. Teacher training may have changed in the four years since the ERA (1988) but such changes were not reflected in the responses. NC support materials were also rated very low. Several teachers reported that they had never seen the support materials published by either the LEA or the Department of Education and Science.

Some of the results were evenly distributed amongst the ratings 1-6 and did not reveal particular trends. While the National Curriculum requirements fell into this category, the more detailed information on specific aspects of the curriculum given in the Tables 7.2-7.6. These tables showed that some that parts of the curriculum were more influential than others. The interview data supported this finding. In order to get a clearer overall indication of most important influences on practice, ratings of either 1 or 2 were tallied for each source of influence. The results of the tally are presented in the bar chart, which follows.

Figure 7.1 Bar Chart on Sources of Influence on Formative Assessment Practices (N=26)



Discussion

Overall it is clear from this chart that the influences of experience in the classroom and the ideas, methods and resources gathered through exchanges with other teachers are the most important influences on the formative assessment practices for the teachers in this study. Given the focus on assessment as a result of the National Curriculum required changes in practice by teachers, colleagues were rated the most consistent source of support, communication and help in making those changes.

In order to continue development of formative assessment skills, the literature on change theory may be instructive. As Fullan explains, "There is no getting around the primacy of personal contact. Teachers need to participate in skill-training workshops, but they also need to have one-to-one and group opportunities to receive and give help and more simply to converse about the meaning of change... Innovations decided on or developed by teachers within a school require teacher-to-teacher interaction, if they are to go anywhere." (Fullan, 1991:131-132) Similarly, Stallings (1989) states that teachers are more likely to change their behaviour and continue to use new ideas if they modify workshop ideas for their own classrooms, try new ideas and evaluate their effects, observe in a colleague's classroom and analyse their data, report their successes to the group or staff, and discuss problems and solutions. None of the four case study schools attempted to develop formative assessment practices in such a direct and comprehensive way.

Head Teacher as an Influence

In the literature review, the importance of the head teacher on teacher practices and staff development and change was established and investigated in the case study interviews. It was not included as an item on the teacher questionnaire. The interview data from the case studies relating to the

influence of the head teacher on formative assessment skills is summarised here.

Case Study One head teacher (See again Appendix B)

The St. Michael teachers suggested that they felt pressure from both the new curriculum and from the changes in the school instituted by the head teacher. The effects of the external and internal pressures were reflected in the teachers' generally low morale at the school. The teachers felt that they were being evaluated or appraised by the head at the same time as they were coping with changes in curriculum and assessment requirements, and a difficult school population. It is important to note that no other schools in this research felt unsupported by their head. This distance and lack of communication between the staff and the head teacher was not observed in the other schools. The Year One teacher did not view the head as helpful in the development of new practices including the curriculum and assessment.

Case Study Two head teacher

Smith and Andrews (1989) found that effective head teachers were most often engaged with their teachers in four kinds of strategic interactions, including those of a resource provider, instructional resource, communicator and as a visible presence. The D'Arcy Road head teacher did not appear to be an instructional resource on a daily basis because he was very busy teaching half-time and doing the work of the head. He was, however, a very visible presence and came into the Year One class at least once every day. He took the role of a communicator and could be seen as a resource provider through his work on the assessment policy and the yearly planning sheets. In Hall and Hord's terms (1987), this head was an initiator, but one of the effects of the pressures of rapid curriculum change was to make him "more cautious" he said. Protecting teachers seemed a part of his reaction to changes he was not certain would be beneficial. This head teacher was viewed as a mentor and colleague

by the Year One teacher. He was influential in the development of her teaching skills including assessment.

Case Study Three head teacher

At the time of data collection, Alexandra Primary was in the process of reacting to a poor HMI school report. The head teacher was very negative in his attitude to the National Curriculum and the changes required in teaching and assessing. In general, the head interpreted his role as a “filter” for his teachers, to protect them from too much change, too fast. His overall feeling about the implementation was that “resources were wasted” and still “one had the feeling of coming away untrained”. More time was needed for training, support and implementation because everyone “learnt it (how to use the NC) on the run.” According to the Year One teacher, the head teacher was not an important influence on her assessment practice.

Case Study Four head teacher

At Holy Name Church of England Primary School, the head teacher saw her role as a “facilitator” in the school and delegated a great deal of the curriculum and assessment work to her deputy head who was also the assessment co-ordinator. The head teacher felt her work was complicated by the power of the Governors of the School, whom she had to keep informed of all changes made in the school. In interview, she expressed concern that the governors had many opinions but very little understanding of the workings of a school. Her diary was full of appointments and meetings with the governors. This was a level of bureaucracy with which the other head teachers in this research study did not have to cope. Accordingly the Year One teacher the head teacher and the curriculum coordinator had not supported her in the development of new assessment practices, even though an assessment policy had been written outlining specific strategies to be used.

Conclusions

Only the D'Arcy Road Year One teacher viewed the head teacher as an important influence on the development of formative assessment skills. The head of that school was an initiator and was viewed as a colleague and a mentor by the year one teacher. He provided resources but also saw his role as protecting teachers from too many changes, too fast. It should be noted that the Year One teacher at D'Arcy Road school demonstrated the widest range of assessment skills seen in the four case studies.

Specific Use of the National Curriculum for Formative Assessment Practice
and/or other purposes

Part E of the questionnaire provides a detailed examination of the 26 teachers’ use of the curriculum in their assessment practice. This data relates to the second research question.

Table 7.2 “ I use Statements of Attainment to plan my daily lessons.” (N=26)

	Mathematics	English	Science
A Lot	9 (35%)	6 (23%)	9 (35%)
A Little	12 (46%)	14 (54%)	12 (46%)
Never	5 (19%)	6 (23%)	5 (19%)

Discussion

From these results close to 80 per cent of the teachers questioned use Statements of Attainment either a little or a lot for daily planning. Approximately 20 per cent never use the statements for this purpose. The anecdotal comments given here illustrate the ways the teachers used the statements.

“To specify what should be learned in terms of each area of the curriculum-half-termly and weekly plans.”

“To extend my ideas a little...”

[“as] A broad basis to my planning and to check I am largely covering what is required.”

“to specify the content of the child’s learning experience. Our school policy is to indicate these POS (programmes of study) relating to

statements of attainment on termly / half-termly planning forecasts. These form the basis of weekly, daily and individual lesson planning."

"for initial planning of topic, then keeping in mind the goals I am aiming to achieve -- Statements of Attainment are the backbone of what I teach."

These comments in general relate to covering the curriculum and articulating goals for learning. There were other comments which point to the integration of planning and assessing.

"It (a statement of attainment) provides a focus for the activities and provides a starting point. I look at S. of A. [Statements of Attainment] to decide upon an activity (or activities) to cover this and then use that activity as a means for assessment."

"To give myself a clearer understanding of what I'm trying to achieve- i.e., a more precise idea."

"I use them (Statement of Attainment) to ensure that the class have attained, as much as possible, the skills, knowledge and concepts appropriate to their age."

"Probably [I use them] more than a little, but not necessarily a lot as lessons are planned to achieve more than the ATs. In Science they are easy to use- an experiment can be structure to meet an AT goal without too much difficulty. In language it is more nebulous. To help plan a sequence of daily lessons in order to achieve a desired outcome."

Table 7.3 “I use Statements of Attainment to decide on a child’s achievement.” (N=26)

	Mathematics	English	Science
A Lot	5 (19%)	6 (23%)	6 (23%)
A Little	14 (54%)	13 (50%)	14 (54%)
Never	7 (27%)	7 (27%)	6 (23%)

Discussion

The moderate to high use of the statements of attainment for deciding on achievement can be understood as a result of the assessment requirements of the NC and its criterion-referenced design. Teachers were to use the Statements of Attainment to compare the work of individuals against national criteria and then report achievement. The result tabled here suggests teachers were beginning to comply with this requirement although 23 to 27 per cent of the teachers selected never as their response, suggesting they would not attempt to use Statements of Attainment for this summative assessment purpose.

Table 7.4 “I use Statements of Attainment to help diagnose a child’s strengths and weaknesses.” (N=26)

	Mathematics	English	Science
A Lot	1 (4%)	1 (4%)	2 (8%)
A Little	16 (62%)	16 (62%)	14 (54%)
Never	9 (35%)	9 (35%)	10 (38%)

Discussion

These results for all the teachers in the four case study schools suggest moderate use of the curriculum for the formative assessment purpose of diagnosing strengths and weaknesses in a child. Very few teachers used the statements a lot for this purpose. It is also important to note that the number of responses for “never” use Statements, is higher for the formative purpose than it is for the summative purpose of deciding on achievement. This suggests the curriculum is more influential for teachers for making summative determinations about student progress than it is for the on-going daily assessment work of diagnosing particular strengths or problems in a child’s progress.

Table 7.5 “ My teaching methods and class organisation have been Influenced by the National Curriculum.” (N=26)

	Mathematics	English	Science
A Lot	8 (31%)	6 (23%)	8 (31%)
A Little	10 (38%)	10 (38%)	12 (46%)
Never	8 (31%)	10 (38%)	6 (23%)

Discussion

These results indicate that the teachers in the four case study schools feel their practice has been influenced by the requirements of the National Curriculum to a moderate degree. These results confirm what was evident in the individual case study teachers interview data.

Table 7.6 “My record-keeping methods have been influenced by Teacher Assessment (TA) requirements.” (N=26)

	Mathematics	English	Science
A Lot	8 (31%)	8 (31%)	8 (31%)
A Little	13 (50%)	13 (50%)	13 (50%)
Never	5 (19%)	5 (19%)	5 (19%)

Discussion

These findings suggest the teachers in these four schools believe their record keeping has been influenced by the NC requirements to a moderate to

high degree. Comments mentioned that more time and more kinds of assessments needed to be recorded for each pupil than before. This finding coincides with the results collected in *The Impact of the Education Reform Act at Key Stage One* by Pollard et al. (1994: 197) In their report on record-keeping requirements, they noted that 81 per cent of their sample teachers (N=88) felt they had experienced “a lot” of change in the amount of time they spent on record keeping in 1990. When the questionnaires were completed again in 1992, 90 per cent of the sample selected the “a lot” category. When reviewing these results, the authors suggest that even though the teachers became more familiar with the curriculum and the assessments and record keeping requirements, the has “done nothing to reduce teachers’ resentment and frustration at the amount of time they were having to spend on procedures for which they did not see a value.” (Pollard, 1994:196) Further to this, when the teachers were asked to identify their own strengths as teachers, 61 per cent mentioned curriculum-related skills and only 2 per cent mentioned assessment skills. From these results, it appears that teachers still separate assessment from other aspects of teaching practice, and the National Curriculum and its assessment requirements have done little to change that attitude.

An Overview of the Four Case Study Teachers' Formative Assessment Practice

A cross-teacher comparison of the assessment practices of the four case study teachers is tabled below. Selection strategies and skills were developed over the course of the review of literature and case studies. The results of the data collection were organised to summarise the range of formative assessment practices demonstrated by the case study teacher during the data collection period. While it is not possible to conclude that the teacher never uses a particular assessment strategy, if no evidence was observed over

the weeks of data collection in the classroom, then it may be safe to suggest that the strategy is not part of the teacher's regular on-going daily practice.

Table 7.7 Summary of Formative Assessment Practices Demonstrated
by Each Case Study Teacher

Practices	Case 1 -SM	Case 2-DR	Case 3-AL	Case 4-HN
1. Written long and short term plans based on curriculum requirements.	Yes. Sometimes plans completed after teaching.	Yes-clear use of these documents for planning	Yes. Extensive daily planning	Yes- but more on long term plans.
2. Adaptive strategies in response to emergent criteria.	No evidence	Yes. Used whole group teaching to review learning	Yes. Used whole group teaching to review learning	Some evidence. provided more time frequently as major adaptation
3. Feed forward into planning information of learner understanding.	No evidence of this practice	Yes. This was evident in planning notes.	Yes. Evidence not found in notes but from observation	No evidence of this practice.
4. Assessment information feeds forward into planning and teaching	No evidence of this seen in practice	Yes. Extensive evidence of this in practice	Yes. Feed forward into teaching. Little evidence of planning changes	No evidence of this seen in practice
5. Teacher discourse to elicit criteria through questioning and feedback	Yes - though not extensive evidence of this in practice.	Yes – reviewed criteria for achievement frequently.	Yes – before and after lessons	Yes – evidence for this practice given in children’s ability to articulate criteria
6. Teaching uses modeling and guided practice	Yes – in handwriting and science to some degree	Yes – especially frequent in small group lessons	Yes – daily use of modeling and guided practice	Yes – in handwriting and maths
7. Teacher uses student or expert exemplars	No evidence of this practice	Yes – but always student work shown as examples.	Yes – student work only	No evidence of this practice.

Practices (cont'd)	Case 1 cont'd	Case 2 cont'd	Case 3 cont'd	Case 4 cont'd
8. Feedback especially feedback for improvement and achievement	Very little evidence of this type of feedback	Yes – extensive use of this type of feedback	Yes – Also used feedback to connect new learning to other concepts	Some evidence of this type of feedback (Type C and D)
9. Meta-cognitive questioning of processes and products	Little evidence of this practice – question usually closed questioning	Yes – many open-ended questions. Asks how the work was done. Revealed her own thinking processes as well.	Yes – often asked children why and how questions about their work	Yes – open-ended questioning. Avoided directing answers
10. Collects, communicates and records achievement information	Little evidence of this practice – some use of tick sheets for phonics	Little evidence of this practice	Little evidence of this practice	Little evidence of this practice
11. Use of formal and informal observation	Some evidence of this practice – no anecdotal notes	Yes. Formal and informal observation important to this teacher	No evidence of this practice – no anecdotal notes – teacher did not like taking notes and teaching	Yes – listens very intently to students, talks very little while they are speaking
12. Use of anecdotal notes or memos	Yes. – some evidence of notes but only in reading	Yes – extensive anecdotal note-taking	Yes – but only a few for reading	Yes- some evidence of notes in reading only
13. Use of standard and/or perf. - based assessment tasks or tests	No evidence of this practice other than some science topics taken from NC	Yes – Used Performance based assessments. No standardised measures	Some performance tasks but no standardised measures	Some perf.-based tasks in maths only.
14. Portfolios developed by and with learners	Uses work books and note books as primary source of samples	Yes – but not used formatively with the students	Yes – but no discussions with the students as to what should be in or why	Not completed although a “best works” portfolio is required by assessment policy

The table below outlines the range of assessment practices demonstrated by each teacher in the case study. The numbers do not represent quantitative data, rather they are used to summarise my observations of their practices during the collection period.

Table 7. 8 Summary Table of Formative Assessment Skills Practised by the Four Case Study Teachers (Total of 14 Practices)

	Case 1	Case 2	Case 3	Case 4
Practice with Evidence Demonstrated	2	11	8	3
Little Evidence of Practice	6	2	4	7
No Evidence of Practice	6	1	2	4

Discussion

Tables 7.7 and 7.8 indicate that Case Study Two and Three teachers demonstrated the widest range of formative assessment skills in their on-going daily practice. They were observed to use a variety of strategies most closely associated with formative assessment, although the case studies also indicate that the teachers did not always use the strategies to their fullest potential. A brief overview of the influences rated most important by these teachers again relates to the research questions which directed this study.

Case Study Two teacher

The Case Study Two teacher ranked her own experience in the classroom and the National Curriculum as highly significant influences on her practice. Ideas, methods and resources from colleagues were also ranked number one. She ranked teacher training the very lowest at sixth. She reported

that she did not have any assessment training in her pre-service teacher programme. INSET she ranked third, and commented the INSET for the National Curriculum had been very poor. Although she ranked INSET third, her interview data belies this finding. The teacher explained that she had taken a specific INSET course on staff development and observation techniques after teaching for two years. She said this course taught her, “the power of reflecting” and “the advantages of observing”. The course taught her not only to observe and question children while they are working, but also trained her to take anecdotal notes on her observations and thinking. The course did not cover all the formative skills observed in her practice, but it may have developed two important aspects of her professional skill. First, she learned from observations that clues to what to teach next can be found in the daily work of the students. Secondly, the requirement of the course to make anecdotal notes appeared to make the teacher more reflective of her own practice. In her interview the teacher said, “This was the best bit of my education” and that she would “listen and assess before I leapt in—no more jumping in maniacally.” From this case study it became clear that a model of formative assessment should include the importance of reflective thinking about the efficacy of the teaching and learning.

Case Study Three teacher

The Case Study Three teacher ranked her own experience in the classroom as the number one influence on her assessment practice. INSET and ideas, methods and resources from colleagues were ranked second. The National Curriculum was ranked third. She ranked her teacher training as sixth. This was the same ranking as the case study two teacher. Teacher training has not included development of formative assessment skills and strategies for these two teachers. In interview, the case study three teacher confirmed her questionnaire responses. She said she plans with the National Curriculum goals in mind but her planning is “always subject to change if I see they haven’t understood.” Again this suggests the teacher observed and reflected on student

learning, or at least understood that this should be done to improve her next lesson.

Questions for Further Research

The findings reported here are based on small samples and qualitative data. They are useful, therefore, as indicators which point the-way to further research. A number of questions have arisen based on the case study and questionnaire data.

1. Teacher training was rated as a very unimportant influence on formative assessment practice. Several questions arise from this finding. How is assessment taught in pre-service training? What are the strengths and weaknesses of the current training? How could it be taught so that teachers might find it more beneficial to their daily practice?
2. Curriculum support material was rated as a very low influence on formative assessment practice. Considering that a great deal of money is spent on developing such materials, how could the materials be used and distributed more effectively?
3. The role of the head teacher in the development of assessment skills was examined. The most influential head was viewed as a colleague and mentor as well as an initiator of change. Might further research support or develop this finding?
4. The influence of colleagues and experience in the classroom were rated the most important influences on assessment practices. How might this understanding be used in school-based initiatives to develop formative assessment skills in both experienced teachers and inexperienced teachers?

5. How could INSET be improved to be a more efficacious method of developing formative assessment skills. If the influence of colleagues is as important as has been noted in this case study, could change and development of new skills be increased if two teachers on courses together as mentors for each other.
6. The importance of reflective teacher thinking in the development of formative assessment skills. If a teacher's experience in the classroom is so powerful an influence on formative assessment skills, can reflective thinking provide the motivation for change in practice?

The next chapter responds to the third research question (integrated formative assessment strategies) and describes the development of the model.

Chapter Eight

Developing a Model of Integrated Formative Assessment Practice

Outline of the Chapter

Part of the third research question was directed to the ways formative assessment strategies might be integrated into the teaching, planning and assessing phases of the teachers' work. Qualitative research into classroom practices produced detailed information describing teachers' use of assessment strategies. Over the course of the case studies, the data included many examples of formative assessment practice which appeared to improve the teachers' understanding of their pupils and their learning. The data also described situations which might be considered to be "missed opportunities" for formative assessment. However, all the examples contributed to the analysis and thus to an emerging model of integrated formative assessment practice. The interview data provided information on teacher thinking relative to their use of strategies, which also contributed to the design of a model.

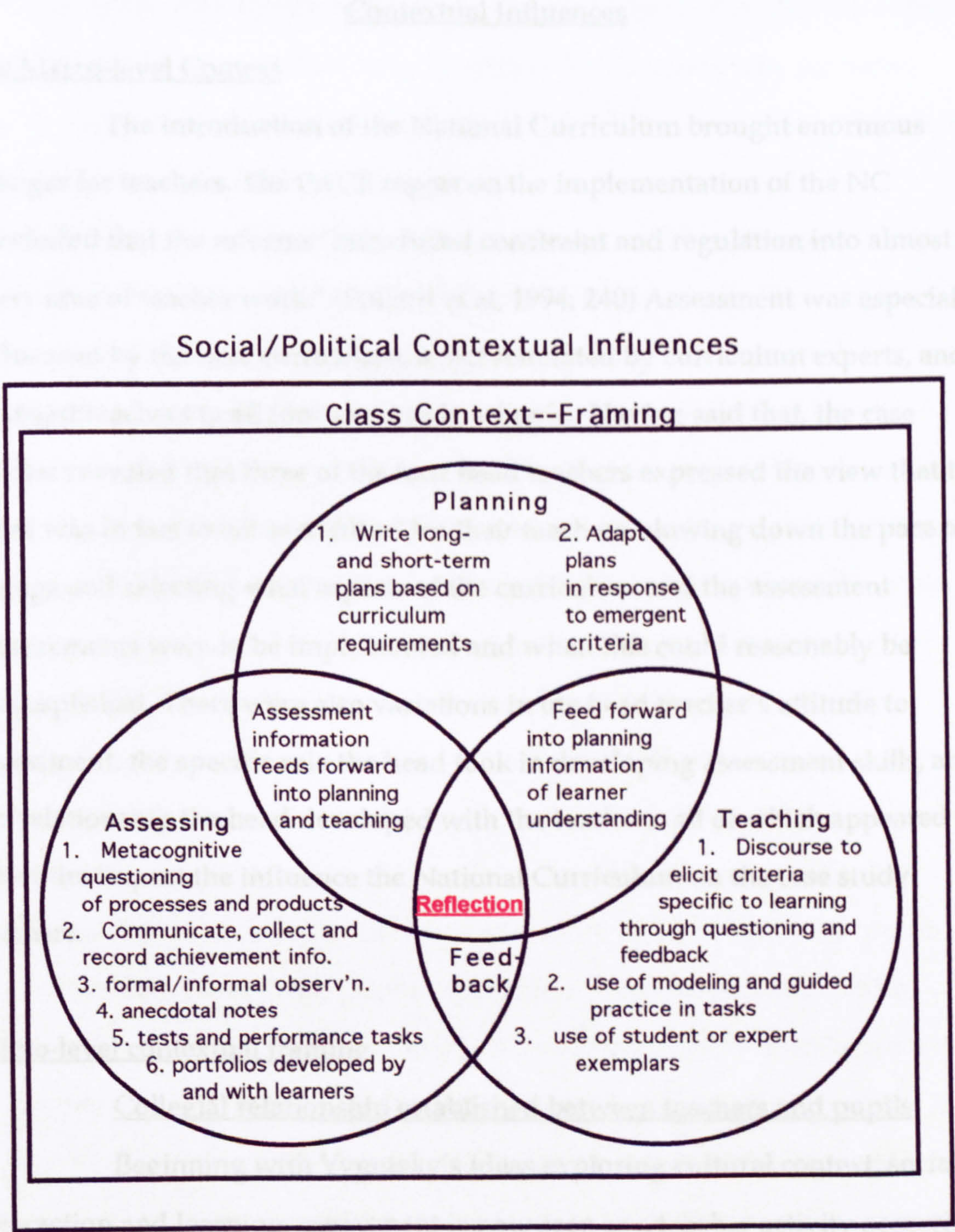
In this chapter, each phase of teacher practice will be discussed separately. The structure of the model is described first, including a discussion of the macro and micro-level contextual influences on formative assessment practice. This is followed by an examination of the assessment strategies as they were observed in the case studies. Explanation is given as to the links connecting the elements of practice. The links are illustrated by the intersecting sections of the model. After the elements of all three phases of teachers' work are examined, the role of teacher reflective thinking will conclude the discussion of the model.

The Structure of the Model

The review of literature strongly suggested that formative assessment is a teacher practice embedded in the planning, teaching and assessing phases of teacher work. Beginning with this general principle, outlined by the Mitchell and Koshy circular model (1993, or see page 57 of this thesis), the analysis of the case studies revealed that strategies could be integrated and connected especially through moves attempting to feed forward into planning information gathered in teaching or assessing. The data was gathered intensively during a complete unit in each of the core subject areas and therefore, data could be collected on the ways the teacher used or did not use information for further planning or teaching or for feedback to learners. After the D'Arcy Road case study, a model of three intersecting circles instead of one circle became the most illustrative structure for the interactions observed. Refinement of the strategies, their placement in the model, and the addition of the reflective approach underpinning all three phases of work, emerged over the four cases. Lastly, interview and questionnaire data confirmed the addition of the two contextual frames around the model.

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Figure 8.1 Model of Integrated Formative Assessment Practice



Contextual Influences

The Macro-level Context

The introduction of the National Curriculum brought enormous changes for teachers. The PACE report on the implementation of the NC concluded that the reforms "introduced constraint and regulation into almost every area of teacher work." (Pollard et al, 1994: 240) Assessment was especially influenced by the new curriculum, a fact reiterated by curriculum experts, and the head teachers in all four case study schools. Having said that, the case studies revealed that three of the four head teachers expressed the view that their work was in fact to act as a "filter" for their teachers, slowing down the pace of change and selecting what aspects of the curriculum and the assessment requirements were to be implemented and when this could reasonably be accomplished. There were also variations in the head teacher's attitude to assessment, the specific role the head took in developing assessment skills, and the relationship the head developed with the teachers. all of which appeared to affect the impact the influence the National Curriculum on the case study teachers.

Micro-level contextual framing

Collegial relationship established between teachers and pupils

Beginning with Vygotsky's ideas exploring cultural context, social interaction and learning, assessment is now seen as a teacher activity occurring within the social, cultural, economic and political contexts of the classroom and beyond (Sutherland, 1996). Moves away from traditional, standardised testing procedures and the adoption of "authentic" assessment strategies including portfolios and performance tasks may not, on their own, alter the relationships of power and control existing between the teacher and pupils. And, although new models of the learning process within the social context are being developed,

many of these also fail to acknowledge the key factor of the power in the relationship between the student and the teacher. (Gipps, 1999, Dwyer, 1998) Torrance and Pryor (1998:155) have identified three reasons why formative assessment or "divergent assessment" is so difficult for teachers to sustain in real classroom situations. In the first place, teachers are distracted from their formative approaches by the exigencies of managing a busy classroom. Secondly, the social and cultural context of the classroom, where pupils have varying degrees of access to power, means that a more collaborative approach to constructing achievement and learning are simply not available. This was especially relevant to the teaching culture found in the first case study (see Appendix B), where the teacher used a variety of tactics to consolidate power in order to restrict and limit behaviour she considered inappropriate. The strength of the frame (Bernstein, 1975) was so well understood by the pupils that the teacher could not modify it even when she wanted to change the teaching strategy to conduct an experiment with the children. She was unable to shift the control of the discourse over to the pupils, even when she added more open-ended questioning and included a hands-on activity. She continued to be understood by the children as the focus of control. The conception of "power over rather than power with pupils" appeared to limit the extent to which collaborative learning could be realised, where knowledge is constructed with the learners through a process of feedback. In analysing the strength of the frame in the two classrooms where more formative assessment strategies could be observed, it appeared that the teacher had been able to develop some level of shared power with the pupils (Kreisberg, 1992).

Several examples drawn from the practice of two case study teachers may be seen as moves contributing to a context where pupils perceived a sharing of power.

1. During the data collection period each of these teachers were observed telling the students that she herself did not understand a

concept or had had trouble learning a skill. The teacher, in other words, did not offer herself as the fount of all knowledge, but a colleague in learning.

2. In one case the teacher preferred to be called by her first name, thus reducing the formality of the classroom.
3. Both teachers stressed learning independent of the teacher through use of collaboration with peers, posted lists directing the pupils to the work that needed to be accomplished on their own, and encouraging students to lead discussions in front of the whole class.
4. Both teachers appeared willing to accept more talk and therefore more noise, in order to foster group work and independent learning than the other classrooms.
5. In both classrooms the teachers were more focussed on process rather than product. They made use of modeling and exemplars to illustrate the processes required. They repeated the criteria for the process for writing, reading and conducting experiments. They used a "think aloud" strategy to articulate problem-solving or task-related processes.

In the review by Gipps (1999 in press) such teacher practices could be driven by an interpretivist approach to assessment and learning. This approach takes account of the complexity of interactions between students and teachers, including such factors as student perceptions on assessments and learning goals.

"The interpretivist approach has implications for how we see the student/ teacher relationship. The didactic relationship between teacher and student is traditionally a hierarchical one and the assessment relationship one of judgement or surveillance. If we are serious about taking an interpretive approach and bringing the student in to some ownership of the assessment process (and hence into self-evaluation) it means teachers sharing power with

students rather than exerting power over them. We must help teachers to reconstruct their relationships, in both learning and assessment, as they shift responsibility to the students." (Gipps, 1999)

Such new terminology illustrates the social complexities of learning and assessment. The findings outlined here point to the ways in which teachers might begin this reconstruction of their relationships with learners.

Planning

Long Term and Short Term Planning

The literature has indicated the curriculum's importance as a description of achievement and as a standard to inform the teacher's criteria for achievement. The curriculum was used for long term planning for all four case study teachers. Confirmation of its use was confirmed through several sources including questionnaires, interviews and by an examination of the daily plans. The use of the curriculum for short term planning was not as easily understood. The St. Michael's teacher said in interview that she used the curriculum for daily planning a great deal for daily planning and had the curriculum binders on her desk, although there was no evidence of the use of the curriculum in her daily plans, nor did she consult them during the data observation period. The second case study teacher also stated she used the curriculum a lot for planning except in English where she had the most expertise. However, she and the third case study teacher had planned topics which had their foundation in the Statements of Attainment and referred to their long-term plans as guidance for their daily plans. The link to the curriculum was therefore evident, even if the teachers were not consulting the documents on a daily basis. In the final case study, the teacher referred to the documents for her "initial planning of a topic--keeping in mind the goals I am aiming to achieve. Statements of Attainment are the bare backbone of what I teach." This teacher had learned a great deal about the curriculum from

the experience of teaching to and conducting the SATs the previous year. While she did not consult the documents and said she used the curriculum only a little, she did not refer to her long term plans to help in her daily plans. The link to the curriculum was not as clear as in cases two and three. For her, the curriculum was not evidently used for teaching and assessing. The potential of the curriculum for formative assessment relates to its link to daily-planning to provide criteria for teaching and assessing. Such criteria help the teacher beyond the subjective, normative judgments based on their "guild knowledge" (Sadler, 1989) and the achievement of that specific group of children. As Popham writes, "Criterion-referenced interpretations provide a far more lucid idea of what it is that students can and can't do. Teachers need that clarity if they're going to make solid instructional decisions." (Popham, 1995: 87)

Adapting plans in Response to Emerging Criteria

As part of formative assessment the literature suggested that the teacher must monitor his or her own teaching effectiveness and adapt plans to respond to instructional needs. The first case study teacher did not update her planning in any way other than indicating that more time was needed to complete the tasks. The second case study provided examples which, when analysed, indicated constant refinement of planning. The teacher planned topic work from the curriculum, and thus her weekly plans reflected curriculum criteria. The daily plans revealed that the teacher changed materials, instructions, questions, groupings and tasks in small ways which appeared to respond to criteria which emerged from her interactions with pupils during the task and her discussions with the pupils after the work session. At several points the teacher called changes in instructions or materials, "giving more clues". Other changes included demonstrations, or modeling processes. The third case study teacher also provided some evidence of planning adaptation, but the fourth showed very little.

The potential for effective formative assessment is very powerful in this strategy of adaptive planning. Attending to the emergent criteria indicates the teacher's attempt to accomplish "divergent assessment" (Torrance and Pryor, 1998; see also the discussion of Convergent and Divergent Assessment in Chapter Two). The authors categorise convergent assessment as information gathered by the teachers on achievement "from the point of view of the curriculum". This kind of assessment judgement refers to the understanding of achievement the teacher has internalised from the criteria (as discussed in the section above on long term planning). In Divergent assessment, where the teacher employs "flexible planning or complex planning which incorporates alternatives," the teacher focuses on "miscues or aspects of learners work which yield insights into their understanding." The criteria emerge from the teachers' assessment of the learning through the teaching phase of work. Here the link between teaching and planning seems apparent. Divergent assessment, according to the authors, is "descriptive rather than judgmental" because it will be used to plan subsequent teaching opportunities. The wording on the final model was refined to "Adapts plans in response to emergent criteria."

Intersection of Planning and Teaching

Feed forward into planning information of learner understanding

Torrance and Pryor also have emphasised, however, that Convergent and Divergent assessment are not necessarily "mutually exclusive": they both provide information to the teacher on learning. In the examples collected in the second case study, it was evident that through her lesson adaptations, the teacher responded to the insights afforded by the miscues in the pupils' work, revealed to her in the way they worked and the way they articulated their progress. The next day's work session included changes to materials and instructions. The link between teaching and planning was clear in these moves. The third case study teacher adapted her instructions and added information and demonstrations

more spontaneously at the end of the work period during whole class feedback sessions rather than changing her daily planning.

Teaching

Discourse which uses or elicits criteria specific to learning through questioning and feedback

The second case study teacher and third case study teacher demonstrated, explained and reinforced specific criteria for achievement. In open-ended tasks, pupils were involved in the development of criteria for achievement especially relating to learning processes. These processes included predicting, developing strategies, checking results, and trying alternate strategies. It was apparent also that the manipulation of classroom organisation created opportunities for discourse which used or elicited the criteria specific to learning for these two teachers and they used similar configurations. Both used small group investigations followed by class discussions where the first group explained to the whole class what they had done and what they had found out. The teacher asked questions probing the thinking and processes used in the task. In this way, the teacher picked up on the problems in the task and could modify it before the next group tried it. Again the result was that the assessment information was connected or linked to teaching. (See the examples in Chapter Five on shadows and Chapter Six on crayon and watercolour paintings.)

It must be stated that attendant to this strategy was a high level of noise in the classroom. The children moved from situations of free talk during their group work to whole class lessons on the carpet where no talking was allowed. Many of the Year One pupils had trouble making these transitions. The emphasis on group work made it necessary for the teacher to monitor several areas of the classroom at the same time. In both classes the group work periods were conducted when a primary helper was in the room; nevertheless the teacher had to move constantly between groups, checking behaviour, observing,

focussing attention on the task and providing various types of feedback. Despite these drawbacks, the method enabled the teacher to learn a great deal from both the small group tasks and the whole class lessons where pupils gave the teacher feedback on their learning. During these sessions, a kind of "reflexivity" (Barnes and Todd, 1977:156) was noted in the teacher's talk whereby the teacher's own thinking and methods for approaching a problem or task were made explicit to the learners. The thinking processes of the learners were also validated. For example, in one case study, the teacher used the method of data collection created by the pupil even though it was rather complex and difficult to use. Other children were referred to the pupil if help or explanation of the method was needed. One possible effect of this form of dialogue was to share the power over learning with the children. This idea will be explored more closely in the section in this chapter on collegiality.

Use of modeling and guided practice

All of the case study teachers exhibited the strategy of modeling and guided practice in their teaching. This may have been a function of the content and skills to be taught in the year one programme which includes work on handwriting, basic reading and computational skills, use of manipulatives and other concrete materials. Lessons in these content areas may lend themselves readily to modeling and guided practice. All the teachers felt these strategies were an effective means of communicating criteria for achievement which in and of itself is an element of formative assessment. Gauging how much guided practice and modeling were needed revealed the level of competence or independence a child had acquired in a skill. Modeling with this goal in mind linked the strategy to assessing. Examples from the case studies included holding a child's hand when making a letter and then observing the child make some of the same letters independently. This was followed by corrective feedback, more guided practices and sometimes talking through the attempt of the child to do it

independently. Other examples included modeling the use of letter sounds and patterns and putting in a finger space between words during group story writing and with individuals at their desks. From these observations, guided practice as a strategy with the potential for formative assessment was included in the teaching phase in the initial and the final model.

Use of student or expert exemplars

In science, art and language two case teachers used pupil exemplars as a means to articulate criteria and deliver feedback identifying specific achievement. Two teachers never used exemplars of any kind. It was interesting to note that two of the teachers said they would "never" use expert exemplars to show the children. One reason offered was that showing such an example might hamper the child's creativity in some way and that the example might make the child discontented with her or his own work. Both views suggest a "discovery-learning" approach. But Sadler argues that students should be given the chance to copy or use features of an exemplar in their work because exemplars constitute a tried and true method of teaching and learning. He notes, "Emulation is an ancient and still almost universal learning method." (Sadler, 1989: 129) When the exemplars were used as a prompt to draw out the children's thinking on excellence, or were used to point out criteria important to achievement, the potential for formative assessment was evident.

Intersection of Teaching and Assessing

Feedback from teaching into assessing and from assessing into teaching.

The powerful role of feedback in learning was examined in the review of literature. From the Gipps and Tunstall (1996) typology of feedback, feedback directed to articulating achievement and improvement relating most closely to the purposes underpinning formative assessment. Through an analysis of the case study feedback samples, an attempt was made to ascertain the ways feedback could link assessing to teaching. For example, this sample connected

the use of a student exemplar with feedback and in doing so provided an opportunity to point out the criteria for achievement to that student and to the others in the class.

C- (she reads a story about staying with her cousin at the weekend.
The teacher interrupts her.)

T- I hear the ing pattern -Read the whole message about going to her cousin.

C- (child reads the rest)

T- That was fantastic! Where does she live?

C- In Pimlico I think.

T-Just look at the writing- Look at those lovely spaces. Do you know what I'm most excited about is all those patterns. Quite often ing- here- should go with the rest of the word. I don't think it's ever on its own. And she's got the ou pattern.

The teacher articulates the criteria for success and improvement as well as correcting errors. And, while the discourse contains praise, the praise is based on specific criteria which can be understood and assimilated by the learner into their next attempts.

In another sample of feedback the teacher connects the learning in one situation to another. The example features a discussion of a student's painting. The student has just explained how he made the picture but cannot say why the water paint did not cover the crayon drawing

T -It couldn't, can't cover the crayons. Why couldn't it? The wax crayon. Why did the paint go away from the wax? (They are holding up James' painting and pointing to the crayon lines showing through the paint wash.)

(James cannot answer. No one can answer.)

T - Get out the oil and water experiment. (A child goes to get a jar on the shelf. She gives it to the teacher.)

Remember we tried it with syrup and juice and water? Three things together? What happened?

C - The oil was lighter.

T - Yes, what else?

C - It couldn't mix up very well.

T - It couldn't mix and because it was light it floated. The same kind of thing happened. The syrup and water have mixed now. (She is shaking the bottle) Now what do you think the wax crayon is most like- the mixing syrup and water, or the oil and the water?

C - Yes the oil--no the syrup. (no clear responses)

T - No the paint ran away from crayon. Look at the pictures- look at Goldie (in James' picture) You can see Goldie quite clearly. Say I did the fish with orange crayon and then used blue. What would happen? Have you mixed yours? (She points to James and he shakes his head no.) You could say the wax is "waterproof". What kinds of things are waterproof?

C - Watches.

T - Yes, if they're specially made. What are the fronts made of?

C - Glass.

T - Glass--right. If the rain hits the glass does the rain come through?

C - No.

The teacher is attempting to use feedback to explain concepts not understood by the student but which are part of the task to be accomplished. The students then use the waterproofing concept to make the crayon drawing lines thicker so that they will show up more. In this way the paintings are improved. The teacher included talk which connected previous learning and lessons to new theory or concepts currently being taught. The teacher attempted to transfer the learning from one situation to another, or identify patterns that may re-appear. This type of feedback was not seen extensively in any other classroom. Feedback

which explicitly connects learning or integrates learning requires more investigation and research.

Finally, feedback was seen as a function of teacher discourse and as such, seemed connected to the teachers' established patterns of interactions with her pupils. As in other patterns of discourse, the type and frequency of feedback seemed to be connected to issues of power in the classroom and the framing of knowledge. (Bernstein, 1971) Analysis of this question also constitutes an area for further study.

Assessing

The model developed for this study indicates that if formative assessment is to be effective it must be integrated into practice. The data analysis yielded demonstration of practice whereby information from their assessments of children at work was fed forward into the next step for teaching. Lunt (1994) explains that assessment tools used interactively can be termed "dynamic assessment".

"Dynamic assessment procedures... involve a dynamic interactional exploration of a learner's learning and thinking process and aim to investigate a learner's strategies for learning and ways in which these may be extended or enhanced. Since it offers individuals an opportunity to learn, dynamic assessment has the potential to show important information about individual strategies and processes of learning and therefore, to offer potentially useful suggestions about teaching." (Lunt, 1994: p152.)

Use of Metacognitive Questioning of thinking processes and products

In terms of assessment discourse, the literature cited in the review (chapter one) emphasised the importance of questioning and feedback directed to closing the gap between current achievement and improvement, using both planned and emergent criteria. Through the analysis of the feedback and

questioning in the first two case studies, these remained important strategies in assessing and extending learning. However, in examining the discourse of case study two and three, refinements were made in the description of verbal exchanges. Both teachers asked questions directed not toward answers but to processes used to arrive at conclusions or to complete a task. The teachers used whole class feedback sessions to have pupils review and explain their work to the class and the teacher. At these times the teachers also talked about their own thinking processes. Dialogue which focuses on problem-solving and articulating thinking processes has been termed metacognitive discourse.

Metacognitive discourse refers to the dialogue between teachers and pupils which mutually illuminates the understanding and thinking processes of both parties about a concept, and explains the processes used by the pupils to carry out a task. Examples from the observations revealed that both teachers listened to a pupil's ideas and at times replied that they did not understand or that they had thought about it another way. The dialogue which ensued had the effect of connecting teaching and assessing. The discourse provided an opportunity for students to explain what they understood and how they had worked on a task, which was useful for the teacher's assessment of pupil learning. Secondly, the information gave the teacher an opportunity to find out whether the learning task had been designed effectively. In the final model, the term metacognitive questioning of processes and products was used to label discourse of this kind.

In some examples, a teacher explained her own ideas and connected them to other information learned in other tasks. In other samples teachers replied to the pupil's explanation with another question. Such exchanges avoided corrective feedback which might evaluate the thinking or the work. Studies on discourse have suggested that comments evaluating a pupil's work, especially in discourse related to learning, shift the learner's comprehension of the discussion from a learning event to an achievement event; from a task-related

comment to an ego-related comment. (R. Butler, 1988) Torrance and Pryor (1998) found in their intensive analysis of classroom discourse that breaking the usual teacher-initiated question, student-response, and teacher-evaluation discourse sequence (Sinclair and Coulthard, 1975) by responding to a pupil with questions, or with more explanation, can lead to an extension of pupil-teacher dialogue, rather than to a conclusion of it ended by a summative stamp of teacher approval or disapproval. The fourth case study teacher used an alternate method which produced the same result. A very quiet person, this teacher was an attentive listener and often directed children's comments to the class for reply rather than talking herself. In that classroom, children responded to each other rather than always to the teacher.

As a result of the study the role of questioning in effective formative assessment emerged as an area for further study in two directions. As we have seen, social and textual factors including issues of power are at work in teacher questioning. Tittle (1994) contends that a teacher's beliefs about knowledge, teaching, and the learner will affect both the question posed and the way the questions are interpreted by students. This in turn will influence the kind of responses made by students. On a more pedagogical level, the type and specific kind of questioning a teacher uses can direct the level of thinking from the lowest level of simple recall to answers requiring synthesis and analysis. Many studies of teacher discourse have reported the largest category of teacher questions are "closed" questions, where only one correct answer is sought. Pupils may use their own strategies to avoid being wrong or to find out the answer the teacher wants in other ways. (Edwards and Mercer, 1989) If the teacher attempts, through more open and detailed questioning, to move towards a more interactive exchange, students may infer that the answer they had just given was wrong. (Torrance, 1993)

Questioning skill emerged as an integral part of both the teaching and assessing phases of the formative assessment model in this research and merits further study.

Communicate, Collect and Record Achievement Information

In the initial model, collecting and recording achievement information was considered a straightforward method of consolidating the teachers' ideas about student achievement. In the first case study, the teacher used workbooks and journals to confirm her ideas about achievement. In the second case study, the teacher made anecdotal notes from observations and from reviewing pupils' work. In the third case study, the teacher did not collect information in written form. Of greater importance to her was the communication of assessment information to the pupils. Adding the element of communicating achievement provided the link into feedback to the learner. Therefore the strategy with more potential for effective formative assessment would be for the teacher to collect, record and communicate assessment information to the pupil. The communication element provides the link through feedback to the learner and into the teaching phase.

Use of Formal and/or Informal Observation

Through the discussion of the literature in Chapter Two, observation skills were established as a strategy integral to assessing learning. While it was evident in the case study analysis that the teachers observed children while they worked on tasks, it was less clear how they used their observations to assess learning and adapt their teaching strategies. For example the case three teacher reported that to her, it was impossible to observe, take notes and teach at the same time. She did observe children at work and although she did not make notes of her observations, she adapted her instruction and asked questions probing difficulties she observed in their progress. The fourth case study teacher had a very quiet manner and listened and observed often. However, there was

very little evidence that she used the information she gathered through observation for any instructional purposes.

The second case study teacher attempted a more systematic form of observation. The Assessment Policy at this school had identified the importance of observing. It stated, "Brief observations of individual children that arise out of daily curriculum activities and feed into teachers' planning (formative assessment)." Over the period of two weeks to a month, the teacher tried to observe each pupil without interacting with the individual. She wrote notes on "how the children work." This was to give herself feedback on her planning and about the "child's work habits". She said this only works because she has "stressed independence" when they are working. Notes from these observations were put in a separate binder under the name of each pupil. The information was not necessarily communicated to the children at all times. Nevertheless, the teacher did make modifications to her planning as a result of the understanding developed through observing. As mentioned in the section on reflective practice, this teacher had taken a course on observation techniques and she cited this as the most important teacher training she had ever received. While the link between observation and formative assessment was evident, the strategy was not always employed to its potential in these classrooms.

Use of anecdotal notes

All the teachers used anecdotal notes to track progress of pupils. It was interesting to note however, that this was only done in the area of reading. The case study three teacher was specifically asked about this. She suggested that because reading is the number one skill to be accomplished in Year One, teachers were intensely monitoring individual progress in that area. For all other subjects, tick sheets tracking coverage were the only forms of note-taking done in class.

An examination of the anecdotal notes of the case study two teacher indicated the formative assessment potential of anecdotal notes. Her notes from reading sessions were brief but contained details useful for formative purposes.

The teacher read with each child once a week and took notes as she read with them.

Her notes focussed on the processes the child has used, what skills had been achieved and what strategies were used in the reading. Below are several of her anecdotal comments.

L. Wo--The Hungry Giant-- Brilliant! has been practising--
excellent 1:1 using 1st letters as well*

Victoria--hesitant--not v. effective use of phonics

*comments the teacher said out loud to the pupil.

This teacher used these assessment notes in two ways. At the time of reading, the notes helped her pick the next book for the child to try. The teacher also used the notes for direct feedback though this was not done frequently. The teacher used the notes for planning whole class assignments or for whole class lessons. In this way assessing was linked to teaching.

Use of performance tasks or tests

In Chapter One, conducting tasks so that the learners' thinking is revealed was identified as a formative strategy. In the first case study, the teacher used the float-sink experiment from the early SAT materials as a means of adding an experiment to her science lessons as way of exploring the pupils' understanding of flotation and density. However, she used the same list of questions for each group and demonstrated the task rather than letting the children explore the materials. The children's notes developed from the task were useful but they would have been more useful if the teacher had watched and listened to the children as they developed their notes. When assessing the notes, the teacher appeared to focus on the spelling, neatness and completeness of the notes rather than the content task. Although this was considered as a missed opportunity, the incident suggested the directions or the links to teaching and planning which might have been made.

In the second case study, the teacher used performance assessments taken from specific schemes such as the BEAM Maths activities, to teach a concept and a process of accomplishing a task. The teacher said that such activities were not only effective for teaching but also especially important as a means of assessing thinking and knowledge. She used small group sessions with these tasks and questioned the children as they worked. Clearly the teaching tasks were linked to assessing learning while at the same time providing opportunities for feedback. The next two cases provided specific examples of the use of performance tasks for teaching and assessing; one in a science task on constructing a boat that would float and in the last case study in a task where money was used to buy the greatest number of sweets. Because of their potential for providing assessment information on thinking and learning, performance tasks were moved to the assessing phase of teacher practice.

The performance tasks seen in the case studies did not have assessment rubrics, nor did the teachers construct them. Use of tasks which included assessment rubrics indicating key concepts and achievement criteria might further develop the potential for formative assessment in such tasks. It might also serve to train the teacher in the use of such scoring systems and criterion-referenced curriculum materials. Beyond this, if teachers and pupils are familiar with rubrics, then teachers and ultimately the pupils themselves might develop rubrics for in-class and independent tasks. Developing rubrics can provide an opportunity to communicate achievement criteria, for self-assessment and for independent learning.

Portfolios or student collections developed with learners

Following the literature reviewed in Chapter One, portfolios were included in the list of strategies which might be used to collect and record information on achievement. From the first two case studies, it was evident that portfolios could have a formative use. Here was an example of where an

opportunity for effective communication on achievement and scaffolding development was evident because it was missed. The teachers indicated that collections of work were important as evidence of achievement, but they did not use the portfolios as a basis of discussion with their students. What was put in the portfolio and why it was included was not mentioned to the pupils. In the first model portfolios were included as a strategy with potential for formative assessment purposes. In examining the use of portfolios with the next two case study teachers, it was again evident that they used these collections summatively rather than formatively. In all cases the teachers had no idea of how the collections might be used as a form of self-assessment or a vehicle for feedback.

Information on the potential of portfolios to improve formative assessment came from school documents. In the fourth case study, the assessment policy carefully explained how a "best works" portfolio could be used to communicate an understanding of achievement to the pupil and to the receiving teacher the next year, as well as providing an opportunity for the pupil to develop his or her own criteria for learning and improvement. The case study teacher was however, completely unaware of these uses of student collections. (See Appendix 6.2) While not utilised formatively in these cases, portfolios remained in the model as a strategy. The labeling changed in the final model from portfolios to "portfolios developed by and with learners" to emphasise the potential for self-assessment and teacher-pupil feedback in this strategy.

Intersection between Assessing and Planning

Assessment information feeds forward into planning and teaching

When a teacher directly uses the information learned from assessing pupils in such ways as changing the instructions or questions, materials, directions, or even the task, assessing is connected back to planning. Integrating assessing and daily planning was seen to provide the clearest "scaffolding" to

learning, providing a "next step" directly connected to the construct held by the pupil or the level of achievement the pupil demonstrated. Although a wide variety of assessment strategies may be used for this purpose, the teachers appeared to have selected the assessment strategy and the classroom organisation directed by time and the number of pupils they were teaching. Two teachers used whole class teaching sessions where questions on concepts and processes might be explored. This information was used to plan the next day's lesson.

The Intersection of all three Sections of the Model

Reflective Thinking

The intersections of the three circles in the model represent the importance of the teachers' reflective thinking about the effectiveness of his or her teaching, planning and assessing. The case study teachers who had the widest range of formative practices also demonstrated reflective thinking through their comments in interview, notes or questioning of the children. In the case of these two teachers, the reflective stance to their own practice corresponded to their pedagogical approach to teaching. A question for further study might be to examine the possible connections between teachers who reflect on their own efficacy and practice and those who employ a problem-solving approach to their teaching. While it was not the focus of this study, it became clear through the analysis that two case study teachers exhibited a problem-solving approach to student learning *and to* their own teaching.

The model developed in this study is a representation of formative assessment derived from the literature and the analysis of these four cases. The implications and contribution of the model to our knowledge will be examined in the last chapter.

Chapter Nine

Formative Assessment- From Theory into Pedagogy

Basis for the Study

The impetus behind this study into the processes of formative assessment was the advent of the British National Curriculum and its assessment arrangements. At the time this study began, curriculum designers and education experts concurred that a criterion-referenced curriculum, such as the NC might have an influence on teachers' knowledge of criteria for achievement and criteria for assessment. During this period the literature also emphasised the potential learning effects of effective formative assessment (Black and Wiliam, 1998) and investigated formative assessment strategies, most specifically relating to discourse and feedback. The need for such classroom-based analysis of formative assessment as it impacts on pedagogy has been advanced by other researchers. As Torrance and Pryor state, "Formative assessment has emerged ... as a complex social and educational practice, and one that needs to be developed further." (Torrance and Pryor, 1998: 170) This research was designed to develop formative assessment knowledge in two new ways. I intended to investigate the use of a criterion-referenced curriculum for formative assessment purposes and secondly, I attempted to uncover links between strategies and to describe if and how formative assessment might be integrated into the planning, teaching and assessing phases of teacher practice.

With these goals in mind, a case study plan was developed. The case study research project took place in 1994 within four schools in the same LEA, after primary teachers had worked with the National Curriculum materials for two years. The research focus was narrowed to Year One teachers at the primary level in order to avoid the direct influence of the SATs on formative assessment practice. Data was collected through observation, interview and questionnaire to

provide an understanding of the influence of the National Curriculum on their formative assessment practices as well as other sources of influences identified through the literature. This was done to provide a richer description of how the practice of the Year One teacher came to be, and might suggest future research into the ways and means of enhancing formative assessment skills. The methodology used in the research is described more fully in Chapter Three.

Research Outcomes and Interpretation

1.Outcomes on the Influence of the National Curriculum

In 1993 and 1994, British curriculum experts reported that given proper implementation, a National Curriculum based on a criterion-referenced model of curriculum could have an impact on teacher assessment practices including formative skills. Indeed, this potential for impact has influenced curriculum design in many educational settings right up to the present time, such as the 1998 curriculum introduced in Ontario, Canada. This study was designed to investigate the influence of the National Curriculum on teachers' formative assessment skills. One outcome of the questionnaire data (see Figure 7.1) indicated that the teachers in this study rated the influence of the National Curriculum as fourth out of six choices of influences. This implies that the teachers did not perceive the NC as influential in their daily assessment practices within their classrooms. The results from questionnaire items on the use of Statements of Attainments give more detail to this outcome. Approximately 80 per cent of respondents suggested the Statements of Attainment were useful (a little to a lot) for their daily planning. (See Table 7.2) The anecdotal comments suggested, however, that the statements were most useful in tracking coverage of the curriculum, and for writing half-termly plans which they referred to for daily planning. They were apparently not used formatively in daily planning where criteria are used to inform judgements and plan the next steps in the learning process. One interpretation of these findings suggests teachers could not use the statements for assessment because they were still trying to get some measure of

control over the new curriculum, despite the fact that they had been working with the curriculum for over two years. The over-specification in the early NC, before the Dearing Report directed a "slimming down" of the curriculum into fewer descriptors, seems to have been a major impediment to its use for assessment purposes. As a question for further research, study of the potential use of a criterion-referenced curriculum model for daily planning could be revisited in a setting using a curriculum with fewer criteria.

A further examination of the criterion-referenced curriculum model resulted in the findings that teachers used the curriculum more for summative assessment purposes than for formative assessment purposes. (See Tables 7.2-7.6.) The summative assessment purposes probed included deciding on a student's achievement and reporting to parents. The formative purposes included diagnosing strengths and weaknesses and for daily teaching and classroom organisation practices. It might be argued that teachers made modifications to those assessment areas where they were obligated to comply with new requirements and procedures, while daily practices had not been influenced as clearly.

Although a larger sample of questionnaires might have improved that reliability of the findings this was not the intent of the study. Rather, the results derived from the small group of respondents were extended through the examination of planning documents, follow-up interviews and observations.

2. Outcomes on other sources of influence on formative assessment practices

A principal research question looked at sources of influence including the curriculum on teacher formative assessment practices. The literature on teacher development suggested possible sources of influence. Lowest of all ratings was the National Curriculum support materials. Despite the money, time and effort put into these documents, the teachers in these four schools did not read or use these materials. Several teachers reported that they had not even

heard of them. Clearly, the documents were not an effective means of communication between the government, the LEA and the teachers. If money is to be spent on the production of supplementary documents and support materials, more attention should be paid to putting them into the hands of teachers.

The questionnaire results suggested that the influence of colleagues and experience in the classroom were by far the most important influences. (See Table 7.1.) In reflecting on this outcome, it might be conjectured that any attempt to improve and develop formative assessment skills should be directed to school-wide innovation efforts. Indeed, much of the literature on school improvement confirms this notion. (Mortimore et al. 1988, Fullan, 1991) Peer mentorship is a key part of change on innovation. However, teachers' heavy reliance on colleagues for skill development seems misplaced. Without professional input into the process of improvement, techniques grow out of necessity in response to particular incidents in the classrooms and thus may not be carefully thought-out. The teachers' techniques developed in this way would certainly not be based on any theoretical understanding of the literature on learning and formative assessment.

Looking at the results from another perspective, the very low rating given to both initial teacher training and in-service training, may not be because they are poor vehicles for improvement, but because the training has simply in many instances not been relevant or effective enough. It appears that these two conduits have been greatly under-utilized as a means for developing the teacher thinking and skills fundamental to formative assessment. Further to this, the case study teachers who demonstrated integrated formative assessment skills reported that in-service training had been influential in development of their assessment skills. These outcomes, it would seem, suggest that a direction for future efforts in developing skills should be in-service and especially pre-service teacher training. Pre-service training seems an appropriate place to include

assessment training, for as this study has shown, formative assessment is embedded in teacher thinking and pedagogy.

3.Outcomes on the Integration of Strategies

This study attempted to examine the interactions between strategies in an attempt to construct a model of integrated formative assessment practice. In the end, it appeared that it was possible to construct a representation to illustrate observed practice, showing the interrelationships between planning, teaching and assessing. It confirms that there must be an on-going continuous feed back loop between these three phases of teacher work. The model also attempts to respond to the complexities inherent in the effort to integrate strategies. The methodology, whereby a complete unit in the three core subjects was observed intensively every day, allowed for links and feed back between the three phases to be identified. The selection of the qualitative case study approach was appropriate, especially the use of several cases, where both the integration of strategies and the absence of integration were instructive.

The model also illustrates what was learned about the dynamic interplay between the three aspects of teacher work, driven by the teacher's reflective thinking. Again, the multi-site case study approach was appropriate in challenging the analysis from previous cases to gain a clearer understanding of the process. For example, one case study teacher used several of the strategies included in the model and was also an astute listener. The pupils responded to each other instead of directing their thoughts through the teacher. However, the teacher did not reflect on the information she learned through listening and observing students and did not adapt her instruction because of this. The opportunity to make formative assessment more effective was frequently missed because of this unreflective stance. Constructing the model from case study also compelled a widening of the parameters to include issues such as teacher thinking and pedagogy, an outcome not considered when the study began.

4. Outcomes on Pedagogy and Teacher Thinking

The literature on formative assessment suggested that it was a practice embedded in teaching, but the extent to which this was true was not anticipated at the outset of the research. Indeed, in the attempt to find connections between strategies, the critical impact of teacher thinking and pedagogical choices became evident. An underlying mind-set of reflective thinking appeared to be the motivating force for their decision making in the classroom. The reflective stance observed in two case study teachers became apparent through their problem-solving approach to teaching and their pupils' learning. A paradigm shift to a problem-solving approach in teacher thinking is described by Shinn and Hubbard (1992). This "problem-solving approach" was evident in the two case study teachers' approach to the pupils and to their reflections on the effectiveness of their teaching. (See Table 8.1.) In their practice it was observed that they were especially aware of three dimensions characteristic of the problem-solving approach; Unit of Analysis, Time Line, and Locus of the Problem. For example, the teachers' work suggested that they were on the lookout for information about whether their teaching was working or not for individual students during the process of learning. They were interested in whether or not the task completed by the pupils gave them information as to what or how to teach them next. Shinn and Hubbard identify this as finding "relevant curriculum instruction and contextual factors that contribute to problem solution" One teacher in particular was constantly aware of the learning of individual students and kept anecdotal notes of observations. Several examples of an underlying problem-solving approach could be seen in their work.

Table 9.1 Shinn and Hubbard, 1992
 Different Questions Arising from Paradigm Shift
 (also cited in P. Black and D. Wiliam 1998, p. 60)

Dimension	Current assessment paradigm	Problem-solving paradigm
Purpose	Do assessment results spread out individuals facilitating <i>classification/ placement</i> into groups?	Does assessment result in socially meaningful <i>student outcomes</i> for the individual?
Test Validity	Does the assessment device measure what it says it measures? Criterion-related Validity: Does the test correlate with other tests purporting to increase the same thing? Construct Validity: Does the test display a stable factor structure?	Are the <i>inferences</i> and <i>actions</i> based on test scores <i>adequate</i> and <i>appropriate</i> (Messick, 1989)? Treatment Validity: Do decisions regarding target behaviors and treatments based on knowledge obtained from the assessment procedure result in <i>better student outcomes</i> than decisions based on alternative procedures (Hayes <i>et al.</i> , 1983)?
Unit of Analysis	Groups: Probabilistic statements about individuals: Do students with similar assessment results <i>most likely</i> display similar characteristics?	Individuals: Does assessment show that <i>this</i> treatment is working for <i>this</i> student?
Time Line	Summative: Does the assessment indicate whether or not the intervention <i>did</i> work?	Formative: Does the assessment indicate that <i>this</i> treatment is working for <i>this</i> student?
Level of Inference	Does the assessment provide an <i>indirect</i> measure of an unobservable construct?	Does the assessment <i>directly</i> measure important target behaviors or skills?
Locus of the Problem	Does the assessment identify relevant <i>student characteristics</i> that contribute to problem etiology?	Does assessment identify relevant <i>curriculum, instruction and contextual</i> factors [that] contribute to problem solution?
Focus	Problem Certification: Does assessment accurately identify <i>problems</i> ?	Problem Solution: Does the assessment accurately identify <i>solutions</i> ?
Test Reliability	Are test scores stable over time? Are scores based on different behavior samples, obtained in different contexts/settings consistent?	What factors account for the variability in student performance?
Context	Does the assessment provide a comparison with students receiving a nationally representative range of curriculum and instruction?	Does the assessment provide a comparison with students receiving comparable curriculum and instruction?
Dimension of dependent variable	Does the assessment provide information regarding the <i>level</i> of pupil performance?	Does the assessment provide information regarding the <i>level</i> of pupil performance and the <i>slope</i> of pupil progress?

From the analysis of teacher practice in this study, specific pedagogical practices were seen as evidence of a problem-solving approach to learning and teaching.

1. Made frequent use of performance tasks in the classroom such as experiments, math games and investigations.
2. Used observation and questioning during teaching tasks.
3. Incorporated curriculum objectives in their planning. Planning notes contained evidence of adaptations made to plans based on information collected about pupil learning. (This is the feed forward element of formative assessment.)
4. Taught the process of problem-solving as part of the lesson i.e. asked students to devise systems of collecting data, directed students to share information and learning from each other, gave explicit information of the learning criteria to be applied in tasks and involved pupils in the use of these criteria.
5. Used whole class lessons to complete a task together using children's ideas.
6. Used information gleaned from children's ideas to make plans for "next steps".

The impact of pedagogical decision-making on formative assessment strategies, including questioning, selection of tasks and groupings, became apparent in the analysis of teacher practice. In the four classes observed, an initial observation on teaching was that there was an obvious variance in the number and kind of pedagogical groups used by the four teachers. The two teachers who demonstrated a wider range of assessment practices than the others also demonstrated more variation in their choice of classroom organisation and

teaching groups. A question that arose from this observation was whether or not the variation of groupings in any way increased the teacher's opportunities to collect and use information on student learning. While the topic was beyond the scope of this study, this question and its corollary, which teaching groups and pedagogical groupings are most effective for particular formative assessment strategies, might be considered as directions for future investigation.

This outcome suggests that inherent in the problem-solving approach is a reflective underpinning to the professional work of teaching. Reflective thinking about the progress and learning of students leads a teacher to question aspects of their practice, including their understanding of curriculum, and subject knowledge. Pollard (1994) has identified the need for teachers to be a "reflective agent" for their students in order to analyse the work of students and scaffold their next attempts. Pollard writes:

It is worth dwelling a little on the importance of the role of an adult as a 'reflective agent' ... providing meaningful and appropriate guidance and extension to the cognitive structuring and skill development arising from the child's initial experiences. This, it is suggested, supports the child's attempts to 'make sense' and enables them to cross the zone of proximal development (ZPD).

Pollard (1994:22-23)

Pollard ties this point in to his notion of 'reflective teaching' (Pollard and Tann, 1987). In their text, *Reflective Teaching in the Primary School*, the authors suggest that courses on developing reflective teaching have been included in teacher training courses. However, training in reflection was denied by the all teachers in this study except one. Further to this, teacher training was not rated very highly in the development of their on-going diagnostic assessment practice; a teacher skill which is greatly enhanced by reflective thinking. The movement toward reflective practice has been championed by many authors especially

Schon (1983) in his influential text *The Reflective Practitioner*. He contends in his writing that teacher's insights into their own practice and their students' learning can become narrowed by experience which he termed Know-in-Action. When change is introduced, such as a new subject or curriculum or teaching situation, one response can be that teachers engage in reflecting-in action, that is questioning and challenging their own assumptions and methods. In two of the case studies, evidence was found that this occurred. The teachers were unfamiliar with the content and processes of the science curriculum and this challenged their thinking about their teaching. Stenhouse (1985) has argued for a powerful means of enhancing professional insight into learning practice through the process of conducting systematic "action research" in their own classroom. This has the effect of challenging teachers' assumptions about student learning and their own practice. In this study, the second case study teacher had participated in an in-service training course on observation skills. The course, she reported in interview, taught her "the power of reflecting". Analysis of the case study data indicated that it was this reflective teacher who exhibited the widest range of integrated formative assessment strategies in her daily practice.

Contribution to Formative Assessment Knowledge

Research into the theoretical complexities of formative assessment has been spurred on by the growing understanding of its potential for learning gains. The examination of specific strategies and contexts have been explored through a wide range of research, from fine-grained analyses of classroom interactions to the quantitative measurement of learning gains resulting from assessment protocols. The present research attempted a further move towards how strategies could be integrated into practice.

Recent research has rightly articulated the impediments to implementation; but if theory is to move into pedagogy, steps must be taken to illustrate how this might be done. A model of practice, even one drawn from a small study, responds to a need identified by practitioners and theorists. It was thought that to construct a model was to attempt to bring clarity to a complex social process. In the final section of their comprehensive review of formative assessment, Black and Wiliam (1998) identify the need for further research to understand the nature of various types of assessment evidence revealed by the learner's responses, an interpretative framework used by teachers (and learners) in responding to this evidence and the learning work used in acting on the interpretations derived from this evidence.

The model which emerged from my study provides one illustration of the ways assessment information might be gathered, interpreted and used to plan subsequent pedagogical moves. In order to do so the study intensively traced the formative assessment process through the three phases of teacher work to describe the use and the "missed use" of assessment information. The literature also linked learning goals to making adaptive instructional moves, but it was not clear how this was done or the part played by curriculum in the process. In these case studies at the Year One level, the data revealed that adaptive planning, so fundamental to formative assessment, is connected to information drawn from learning criteria which emerge from teaching and also from curriculum criteria used in long term or topic planning. While this may not have been the assessment use of curriculum envisioned by curriculum designers, the link between curriculum and adaptive planning was evident in this way. The model shows how teachers could connect curriculum criteria to adaptive planning to develop their formative assessment practice.

The outcomes of this thesis with respect to the level of collegiality established between teacher and student and its impact on formative assessment practice, connect to and are validated by research investigating issues of power

in the classroom and merit further investigation. (Torrance and Pryor, 1998, Kreisberg, 1992)

As well as the contribution of the model, this study provides new information on the daily use of formative assessment in the classroom and on the sources of influences which have shaped that practice. This adds to the knowledge of how formative practice could be enhanced through training and teacher development. The role of reflective thinking and a problem-solving stance as a necessary underpinning to the effective use of formative strategies, provide avenues for investigations into teacher development. Knowledge of this kind is needed to move the theory of formative assessment into improved practice.

To conclude, the findings of this thesis, including the model of integrated formative assessment developed through the analysis of case study data, advance the path to practice, a path which takes account of the findings in the literature and the realities of the classroom.

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APPENDIX A

Chapter 3 - Methodology

Chapter 4- Case Study D'Arcy Road

Chapter 5- Case Study Alexandra

Chapter 6- Case Study Holy Name

INTERVIEW QUESTIONS FOR CURRICULUM DESIGNERS AND CRITICS

DATE *Jan 5/99* LOCATION *Brasserie St. Pierre*

NAME *Brian Cox*

CURRENT POSITION OR TITLE

- retired prof - dept of English - Manchester Univ.

RELATION TO/ INVOLVEMENT WITH THE NATIONAL CURRICULUM. *- former head*

PART A

PRELIMINARY QUESTIONS

DESIGN AND IMPLEMENTATION

of curriculum writing party

1. The National Curriculum uses an objectives-based design structured around Statements of Attainment, examples and a 10-level system of progression. What, in your opinion, are the strengths and weaknesses of such a design?

- The design was organised before the English team was organised. They were ordered to fulfil the 10 level progression + attainment target system. Strengths/Weaknesses. - needed an W.C. agreement. I don't have any idea of the assessment system (as Cox advocated SATS in the Black Paper - but not true SATS).

2. What theory of curriculum design was behind the selection of this design?

- Theory on language acquisition reading. brought in by various members of the English team with consultation - 13 months in the writing.

3. What theory of assessment and evaluation influenced the selection of this design and the assessment arrangements?

- not part of English writing party mandate

4. In your view, what were the most important difficulties in the implementation process? Please rate the following where 1 is very important and 5 is not at all important in your view.

Problems due to the piloting and consultation process before curriculum implementation

1 2 3 4 (5)

assessment
is where

- major
faili
not enough
piloting of
examples

Problems due to the piloting and consultation process before SATs implementation

(1) 2 3 4 5

- not important
never consulted
again

Problems relating to teacher INSET

(1) 2 3 4 5

immense

Problems relating to political interference and input

(1) 2 3 4 5

Bridie
Rabin.

Problems concerning the swiftness of implementation

1 2 3 4 (5)

- rhythm

Problems relating to changes required in teacher practice

1 2 3 4 (5)

Problems relating to the sheer amount of change required

1 2 3 (4) 5

5. WHAT ACTIVITIES DO YOU SEE AS BEING CENTRAL TO TEACHER ASSESSMENT?

planning - whole school young needed
TA must be central (GCSE had
shown the way).

6. IN WHAT WAYS DO YOU THINK THE NATIONAL CURRICULUM MIGHT HELP OR HINDER THE PROCESS OF DAY TO DAY TEACHER ASSESSMENT? WAS THIS EXPLICITLY UNDERSTOOD BY THOSE WRITING AND DESIGNING THE CURRICULUM?

- was designed to help it. When writing
the Statements of Attainment - they understood
them to mean Assessment criteria. This
was explicitly understood by the writing team.

7A. WHAT WAS UNDERSTOOD BY THE TERM 'FORMATIVE ASSESSMENT' AT THE TIME OF THE WRITING AND IMPLEMENTATION OF THE NATIONAL CURRICULUM.

- T.A. was the most used term. Formative
not as developed.

7B DO YOU FEEL THAT WAS CLEAR ABOUT THE DEFINITION OF THIS TERM?

yes.

8. FOR CURRICULUM WRITERS ONLY - WAS THE DESIGN OF THE CURRICULUM WITH ITS USE OF STATEMENTS OF ATTAINMENT MEANT TO INFLUENCE TEACHER PRACTICE IN ANY WAY, I.E. PLANNING, GROUPING, ASSESSING, GIVING FEEDBACK OR RECORD KEEPING. IN OTHER WORDS, HOW DID YOUR WORKING GROUP ENVISION TEACHERS USING THE PROGRAMMES OF STUDY?

FOR CURRICULUM CRITICS- WHAT INFLUENCE DO YOU FEEL THE DESIGN OF THE CURRICULUM WITH ITS USE OF STATEMENTS OF ATTAINMENT WAS MEANT TO HAVE ON TEACHER PRACTICE IE PLANNING, GROUPING FOR INSTRUCTION, GIVING FEEDBACK OR RECORD-KEEPING. PLEASE EXPLAIN.

- day to day functioning - careful to be vague where this was necessary -

(7, 8, 9, 10) same At's - this is to indicate more work should be done in this but should not be hierarchical in nature. This aspect of the design was not suited to English.

9. IN WHAT WAYS IS THE DESIGN OF THE CURRICULUM SUITED OR NOT SUITED TO YOUR SUBJECT AREA (MATHS, ENGLISH SCIENCE).

> Most on the team not enthusiastic about the 10 level system - though the needs for progression was clear - one curriculum through to the primary & secondary required.

10. IN YOUR OPINION, FOR WHAT PURPOSE WERE THE SATS DESIGNED? RANK THE FOLLOWING PURPOSES 1 TO 3 WHERE 1 IS THE MOST IMPORTANT PURPOSE FOR SATS AND 3 IS THE LEAST IMPORTANT.

SATS WERE DESIGNED TO REINFORCE AND CONFIRM TEACHER ASSESSMENT OF STUDENT ACHIEVEMENT. _____

SATS WERE DESIGNED TO MOTIVATE TEACHERS TO CONDUCT MORE SYSTEMATIC TEACHER ASSESSMENT IN THEIR CLASSROOMS. _____

SATS WERE DESIGNED TO GIVE STANDARDISED ASSESSMENT INFORMATION TO PARENTS AND THE PUBLIC. 1

THANK YOU FOR YOUR HELP!

*Can important
to do
so*

Black Papers

- (1975)

Curriculum Studies Department
 Department Chair Professor Desmond L Nuttall
 Dept Email csd@uk.ac.ioe
 Direct Line 071-612



INSTITUTE OF
 EDUCATION
 UNIVERSITY OF LONDON

20 BEDFORD WAY
 LONDON WC1H 0AL
 Telephone 071-612 6313
 Fax 071-612 6330

Director SIR PETER NEWSAM
 Deputy Director PROFESSOR PETER MORTIMORE

24 September 1993

Dear

Re: Research on Teacher Assessment Practice

I am a Canadian teacher currently studying Curriculum and Assessment at the Institute. My interest in undertaking graduate work in this area was sparked by the design of the National Curriculum itself and its focus on teacher assessment. I feel it important that there be more international dialogue on curriculum and policy issues, especially as they affect the daily professional lives of teachers like ourselves. To that end, I have been working on a small-scale research study for my thesis which looks at the ways National Curriculum requirements may influence infant teacher assessment practices. It will be a comparative study; when I return to Toronto next year I hope to interview and observe in several Canadian primary classes as well. I should very much like to include your school in my study. Details of my work and the time commitment are enclosed for your consideration.

In the past year I have conducted a pilot study in ... with the help and kind permission of the Head Teacher Mr John . The teacher who agreed to take part in the pilot study did not find my presence in any way intrusive. My supervisor at the Institute is Dr Caroline Gipps, currently Chair of the Curriculum Studies department. She has conducted research of this kind over many years and has approved my methods and design. This year I need to visit four schools, preferably in one LEA, to collect data. All names of teachers and schools would remain anonymous and I would be glad to keep you aware of the development of my study after my school visit. No children will be interviewed so permission from parents is not necessary. The design of my study would require me to visit your school over the course of a week.

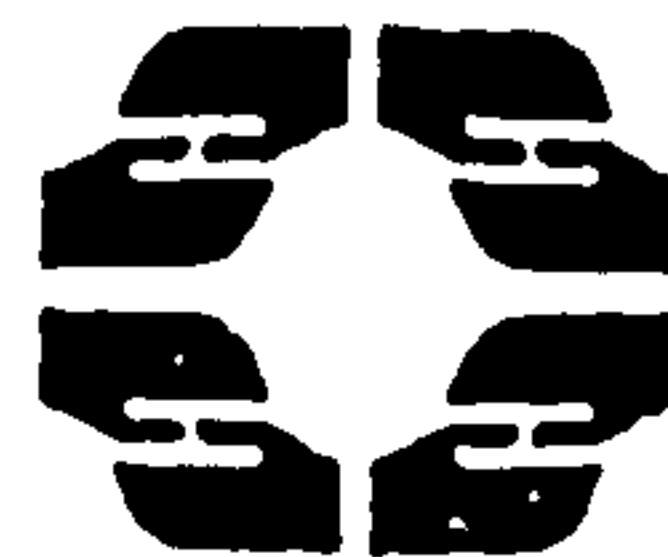
I should like very much to conduct my research in your school. Learning about the practice of teachers in the real world of school is the best way to improve our skills. I look forward to hearing from you soon.

Yours sincerely

Susan Elliott

Enc

2



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LOCAL EDUCATION AUTHORITY

218-220 Eversholt Street
London NW1 1BD

Tel: 071-911 1525
Fax 071-911 1536

X4208

7 October 1993

Ms Susan Elliott
23 Elsworthy Road
London
NW3 3DS

Dear Susan

Thank you for your letter of 27 September 1993 outlining your proposed research project and requesting permission to contact Camden schools. The LEA would have no objection to this, although it should be stressed that the final decision on whether or not to participate in the research rests with the headteacher of the schools concerned.

Perhaps you would let me know in due course which schools have been approached. I would also be very interested to receive a copy of any general report which is made on completion of your study.

Yours sincerely

M. G. u.

Information Manager

1007di06.LET2/OTH

3.3 Semi-structured interview questions for head teachers, Year One and Year Two teachers

DATE _____ SCHOOL _____ HEADTEACHER _____

SEMI-STRUCTURED INTERVIEW QUESTIONS FOR HEADTEACHERS

BACKGROUND INFORMATION

AGE BRACKET 20-30 30-40 40-50 50+

PAST EXPERIENCE/EDUCATION

NO. OF YEARS TEACHING

HOW LONG IN THE POSITION OF HEADTEACHER

NO. OF STAFF

STABILITY OF STAFF

RANGE OF EXPERIENCE AND AGE OF STAFF

Please describe the various staff responsibilities and management structure of the school.

DEMOGRAPHIC INFORMATION CONCERNING SCHOOL INTAKE

HEADTEACHER'S DESCRIPTION OF THE CATCHMENT AREA
(include range of languages spoken, no. of children statemented "special needs" and details of stages of literacy)

ETHNIC RANGE

SOCIAL-ECONOMIC MIX- (include no. of free school meals)

RELIGIOUS AFFILIATION OF SCHOOL IF ANY-

collect any material about the school population
PLEASE ATTACH

NO. OF STUDENTS

GENDER RATIO

HOW DIVIDED INTO CLASSES (mixed ability, streaming/setting, any special classes or features such as mixed age classes)

SCHOOL BUILDING AND ENVIRONMENT

AGE AND CONDITION OF THE BUILDING- RANGE OF FACILITIES

HEADTEACHER'S OPINION OF THE SCHOOL BUILDING AND FACILITIES

FUTURE DEVELOPMENT OR PLANS FOR THE SITE

RESPONSE TO THE NATIONAL CURRICULUM

1. HOW WAS THE CURRICULUM INTRODUCED TO YOU? CAN YOU DESCRIBE YOUR FIRST REACTIONS AND THOSE OF YOUR STAFF?

2.a HAS YOUR OPINION AS TO THE DESIGN OF THE CURRICULUM WHICH USES STATEMENTS OF ATTAINMENT AND EXAMPLES CHANGED OVER THE PAST THREE YEARS? WHAT DEVELOPMENTS AT YOUR SCHOOL HAVE INFLUENCED YOUR OPINION?

b. WHAT, IN YOUR OPINION, ARE THE STRENGTHS AND WEAKNESSES OF THE DESIGN? FOR EXAMPLE, ARE STATEMENTS OF ATTAINMENTS USEFUL IN PLANNING?

3. HAS YOUR OPINION AS TO THE CONTENT OF THE NATIONAL CURRICULUM CHANGED OVER THE PAST THREE YEARS? DESCRIBE YOUR SCHOOL'S METHODS OF MANAGING THE CONTENT OF THE NATIONAL CURRICULUM.

4. HOW HAS YOUR STAFF COPEd WITH THE IMPLEMENTATION PROCESS? NEW TEACHERS? EXPERIENCED TEACHERS? AIDES AND SUPPORT STAFF?

5.a. IN YOUR OPINION WHAT PART SHOULD A HEADTEACHER PLAY IN FACILITATING THE IMPLEMENTATION OF THE NATIONAL CURRICULUM. INCLUDING SATS?

b. WHAT KINDS OF SUPPORT HAVE YEAR TWO TEACHERS HAD DURING SATS? (NON-CONTACT TIME. AIDES OR HELPERS IN THE CLASS, ETC.)

6.a. HAS THE LEA PROVIDED ANY TRAINING, ADVICE, TIME, MONEY OR OTHER RESOURCES AND MATERIALS TO HELP YOUR SCHOOL IMPLEMENT THE NATIONAL CURRICULUM?

b. DO YOU FEEL THE INSET HAS BEEN EFFECTIVE AND SUFFICIENT? PLEASE ELABORATE.

7. HAVE YOU DEVELOPED A SCHOOL POLICY OF ASSESSMENT?

IF YES, COULD YOU EXPLAIN IT? (INCLUDE COPIES OF DOCUMENTS) IF NO, COULD YOU EXPLAIN WHY THIS IS NOT APPROPRIATE TO YOUR SCHOOL?

8. EXPLAIN HOW YOUR SCHOOL MAKES YEARLY PLANS.

9. HAVE THE CURRICULUM FOLDERS WITH THEIR USE OF STATEMENTS OF
ATTAINMENT AND EXAMPLES BEEN USEFUL IN THIS PLANNING PROCESS?

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IF YES- HOW?
IF NOT- WHY?

:

10. INDICATE THE USEFULNESS OF THE DESIGN AND CONTENT OF THE CURRICULUM BY CONSIDERING THE FOLLOWING STATEMENTS. PLEASE CIRCLE THE COMMENT WHICH BEST REFLECTS YOUR OPINION.

A. THE CURRICULUM'S USE OF STATEMENTS OF ATTAINMENT HELP MY STAFF PLAN LESSONS.

STRONGLY DISAGREE SOMEWHAT DISAGREE UNSURE SOMEWHAT AGREE STRONGLY AGREE

B. THE NATIONAL CURRICULUM'S USE OF STATEMENTS OF ATTAINMENT HELP MY TEACHERS DECIDE LEVELS OF ACHIEVEMENT.

STRONGLY DISAGREE SOMEWHAT DISAGREE UNSURE SOMEWHAT AGREE STRONGLY AGREE

C. THE CURRICULUM'S USE OF STATEMENTS OF ATTAINMENT GIVES MY STAFF SPECIFIC CRITERIA AGAINST WHICH TO ASSESS THEIR PUPILS.

STRONGLY DISAGREE SOMEWHAT DISAGREE UNSURE SOMEWHAT AGREE STRONGLY AGREE

D. THE CURRICULUM HELPS MY STUDENTS DIAGNOSE STRENGTHS AND WEAKNESSES IN THEIR PUPILS.

STRONGLY DISAGREE SOMEWHAT DISAGREE UNSURE SOMEWHAT AGREE STRONGLY AGREE

E. THE CURRICULUM'S USE OF STATEMENTS OF ATTAINMENT IS HELPFUL IN REPORTING AND DISCUSSING A CHILD'S PROGRESS WITH HIS OR HER PARENTS.

STRONGLY DISAGREE SOMEWHAT DISAGREE UNSURE SOMEWHAT AGREE STRONGLY AGREE

11. HAVE TEACHERS MET TOGETHER TO AGREE ON ASSESSMENT OF LEVELS IN A KIND OF MODERATION PROCESS? WHAT IS YOUR ATTITUDE TO THIS PROCESS? 326

IF YES- THEN EXPLAIN THE REACTION OF THE TEACHERS TO THIS PROCESS.
IF NO- THEN EXPLAIN WHY THIS IS NOT NECESSARY OR APPROPRIATE.

12. IS THERE A SYSTEM OF RECORD-KEEPING USE BY ALL OR MOST OF THE STAFF?

IF YES, COULD YOU DESCRIBE IT (LIST SUPPORT MATERIALS IF POSSIBLE)

IF NO, COULD YOU EXPLAIN WHY THIS IS NOT APPROPRIATE OR NECESSARY IN YOUR SCHOOL?

13. IN YOUR OPINION, FOR WHAT PURPOSE WERE THE SATS DESIGNED? RANK THE FOLLOWING PURPOSES, WHERE 1 IS THE MOST IMPORTANT PURPOSE AND 3 IS THE LEAST IMPORTANT PURPOSE.

SATS WERE DESIGNED TO REINFORCE AND CONFIRM
TEACHERS' ASSESSMENTS OF THEIR STUDENTS

SATS WERE DESIGNED TO MOTIVATE TEACHERS
TO CONDUCT MORE SYSTEMATIC PLANNING AND
ASSESSMENT IN THEIR CLASSROOMS

SATS WERE DESIGNED TO PRODUCE STANDARDISED
INFORMATION FOR REPORTING TO PARENTS
AND THE PUBLIC.

14. IN YOUR OPINION, HAVE THE SATS HELPED OR HINDERED THE
ACCEPTANCE AND IMPLEMENTATION PROCESS OF THE NATIONAL CURRICULUM?

3.3 Semi-structured interview questions for head teachers, Year One and Year Two teachers

INTERVIEW QUESTIONS FOR YEAR 1 AND 2 TEACHERS

The questions on this questionnaire will provide information as to the teacher's use of the National Curriculum. This interview allows teachers to articulate what they think they are doing in the class. The observation in class will help to confirm whether or not their ideas are evident in practice.

1. Describe your planning methods for a term. Where do you start?
(Could you show me an example of your planning for the term?)

2. What documents do you use to help you?

NC

published texts

collaboration with other teacher

other

3. How do you go about your daily planning? Where do you do it--by the day, week, etc.? What information do you need from the children to plan? (Could you show me an example of a daily plan?)

4. Describe your record-keeping system. Are you happy with your current system? What would you like to get rid of, add or change? How has it been influenced by the NC requirements? (Once again, could we look at and discuss a sample of your record keeping?) What do you think about portfolios? Are they useful in helping you reflect on a child's achievement?

5. How do you organise your groups for teaching?

6. Before you get children going on a task or assignment, what kind of information do they need to get started? (Do you show

examples, let them interpret the task on their own or tell them what is expected at the end?)

7. Do you like to talk with the children while they're working? (If yes, why? - NOTE: Listen for these possible responses--to ask questions (to get an idea of child's thought processes, to find out what problems he/she is having, to check to see if they are using the skills required by the plan or the Statement of Attainment--other reasons? etc.)

8. What kind of feedback do you like to give children about their work?

9. How do you feel about the content requirements of the NC for your age group?

Likes

Dislikes

10. Do you think your school and LEA have helped you sufficiently to take the NC on board?

Thank you for your help!

TEACHER QUESTIONNAIRE

A. A list of assessment activities is given below which may be part of your assessment practice. Rate each one on a scale of 1 to 5 to show the importance you attach to the activity. Please circle your choice, where 1 is the most important and the least important assessment activity.

	Most Imp			Least Imp	
	1	2	3	4	5
Close observation of a child working in class					
Questioning during a task to see if a child understands the skill, task or concept					
Questioning at the end of a task to evaluate the success of the lesson					
Questioning at the end of a lesson to reinforce the main concepts of the lesson					
Giving verbal feedback to a child about the quality of his/her work					
Given written feedback to the child marked on the work itself					
Deciding on levels and recording information about a child's work					
Using SAT-type tasks or other standardised tests to support your on-going assessment					

B. Please rank the importance of the following sources in helping you plan your day-to-day class lessons and activities. Circle the most appropriate number where 1 is very useful and 5 is of little use to your planning.

	very useful			not useful	
	1	2	3	4	5
Published work schemes and teacher handbooks					
Your own records and ideas from observing the child					
National Curriculum statements of attainment					
National Curriculum support material such as SEAC Pupil's Work Assessed					
LEA or school-produced plans and planning					

C. Throughout your career, you may have developed your own methods of making teacher assessments from various sources. A list of possible sources of influence is given here. Please rank the importance of each source, where 1 is the most important and 6 the least important source of influence.

	Rank 1 to 6
Your own teacher training	_____
Your own experience in the classroom	_____
National Curriculum programmes of study	_____
National Curriculum support materials on Teacher Assessment	_____
INSET	_____
Ideas, resources and methods from colleagues in your school and previous schools	_____

D. In your teaching, you may have several reasons or purposes for assessing children in your class. Please indicate the **THREE MOST IMPORTANT ASSESSMENT PURPOSES** selected from the list given below. Read the list of purposes and place number 1 beside your most important reason for assessing, 2 beside your second most important reason and 3 beside your third most important reason for making assessments of children. **PLEASE SELECT THREE ONLY.**

RANK 1 to 3 ONLY

Diagnosing a child's progress and future needs

Diagnosing the progress of my whole class and its future needs

Deciding on National Curriculum levels and grades

Deciding on teaching groups

Identifying children with special needs

Controlling the class eg; using special assessment tasks to promote quiet concentration on work

Motivating the children to achieve more

Evaluating the success of the lesson and my teaching methods

Clearly telling the children what skill or knowledge must be learned through their work

Clearly telling the children what kind of behaviour and work habits are appreciated in the classroom, for example, neatness, diligence, completing the task on time and so on

E. All assessment in the National Curriculum is done by teachers. This section of the questionnaire asks you to consider your own use of the National Curriculum in your planning and assessment. Please rate your use of the National Curriculum in the three core subject areas by considering the list below,

1. Statements of Attainment

The National Curriculum sets out what must be learned by the child in Attainment Targets. These are further specified into Statements of Attainment which indicate what the child should do, know and understand. An example of a Statement of Attainment is AT1-Speaking and Listening level 2 b. "Pupils should be able to describe an event, real or imagined, to the teacher or another pupil."

		Maths	English	Science
I use Statements of Attainment to plan my daily lessons	A lot	_____	_____	_____
	A little	_____	_____	_____
	Never	_____	_____	_____

If you use the Statements of Attainment for planning, could you briefly explain how?

		Maths	English	Science
I use Statements of Attainment to decide on a child's achievement.	A lot	_____	_____	_____
	A little	_____	_____	_____
	Never	_____	_____	_____

I use Statements of Attainment to help diagnose a child's strengths and weaknesses.	A lot	_____	_____	_____
	A little	_____	_____	_____
	Never	_____	_____	_____

2. Examples of Attainment

Beside each Statement of Attainment, the curriculum provides examples of tasks which require the skills or knowledge outlined in the Statement. For example, Science Attainment Target 2 level 2 a. states that "Pupils should know that plants and animals need certain conditions to sustain life." The example given is "Pupils could describe how to look after a pet animal and a potted plant, considering the food, water and environment required."

		Maths	English	Science
I use the examples given in the Curriculum in my lesson planning.	A lot	_____	_____	_____
	A little	_____	_____	_____
	Never	_____	_____	_____
I use the examples given in the Curriculum to decide on a child's achievement.	A lot	_____	_____	_____
	A little	_____	_____	_____
	Never	_____	_____	_____

		Maths	English	Science
I use the examples give in the Curriculum to diagnose a child's strengths and weaknesses.	A lot	_____	_____	_____
	A little	_____	_____	_____
	Never	_____	_____	_____

3. Teaching Methods and Class Organisation

The emphasis on Teacher Assessment (TA) may have influenced your choice of teaching methods and class organisation. For example your methods of grouping for instruction or assessment, use of whole class or group teaching and your record-keeping systems may have been influenced by the National Curriculum.

:

		Maths	English	Science
My teaching methods and class organisation have been influenced by the National Curriculum.	A lot	_____	_____	_____
	A little	_____	_____	_____
	Never	_____	_____	_____

My record keeping methods have been influenced by TA Requirements.	A lot	_____	_____	_____
	A little	_____	_____	_____
	Never	_____	_____	_____

If your methods have been influenced, could you briefly explain how?

THANK YOU FOR YOUR HELP!

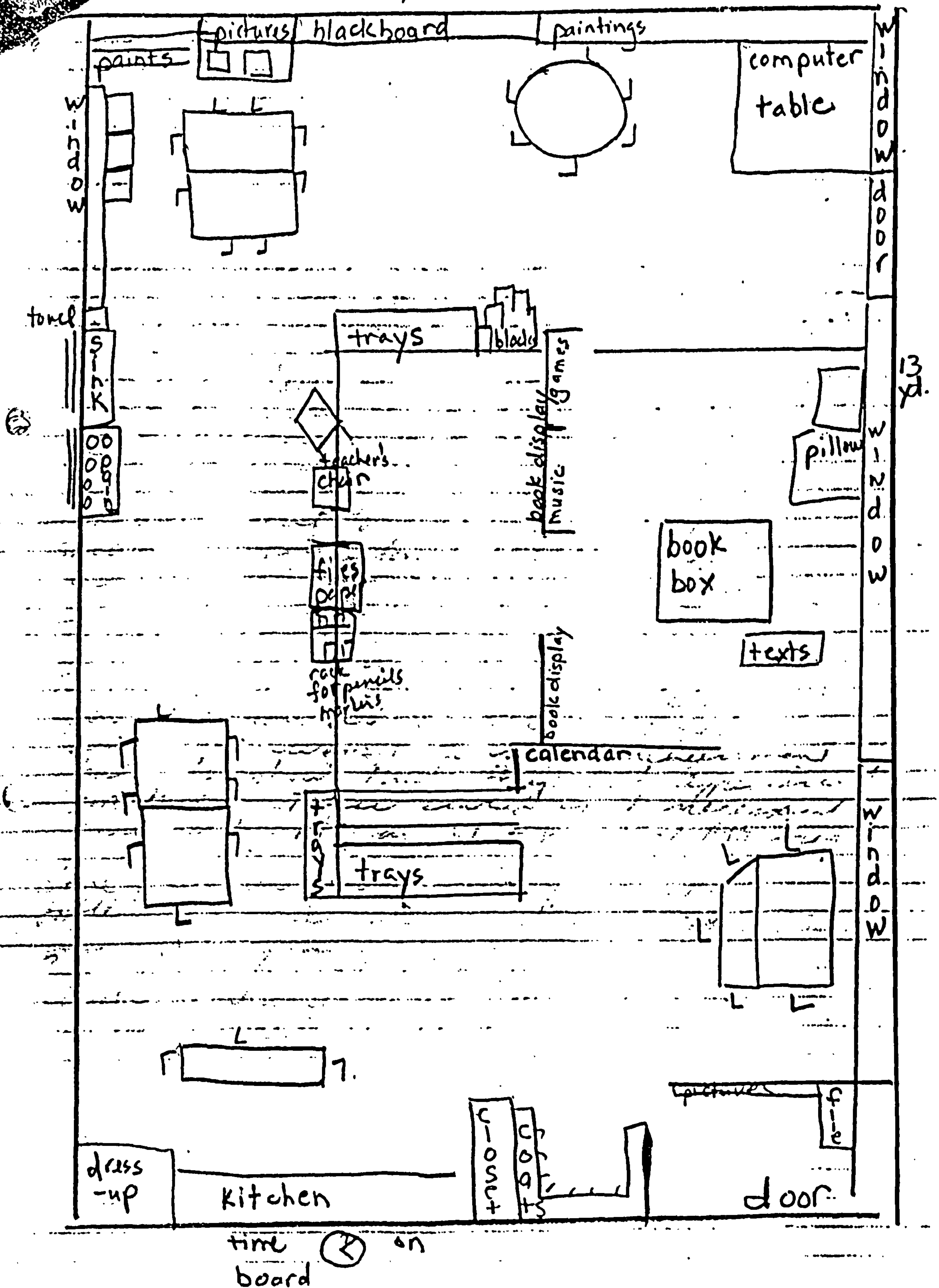
Assessment and Record-Keeping Policy Introduction

Over the past two academic years 1989/90, 1990/91, a lot of in-service time has been spent revising and up-dating our assessment and record-keeping policies. Change and modification were essential in the light of the National Curriculum demands as well as assessment at key stages one and two. Finalising an assessment policy is however, impossible with the gradual introduction of national curriculum guidelines in foundation subjects, review of core subject guidelines and changes to assessment procedures at key stages one and two. It is nevertheless important to collate and agree the different strands of policy alongside planning a timetable for the future. This was done at a staff inset conference in April 1991. The following sections were agreed policy from September 1991 with review dates included where appropriate.

We aim, through our agreed procedures in different curriculum areas, to build up a profile of each child involving parents, children and teachers in the assessment process. Throughout our discussions and trialling of different kinds of record-keeping we have attempted to balance the need to commit information about a child's attainment to paper, with the constraints of teacher time available in the busy primary classroom. At times we have unashamedly agreed upon a compromise, as the ideal assessment process may have been just too time-consuming and demanding of a class-teacher with thirty children. We have tried to keep in mind that anything committed to paper should be useful and not just written down for its own sake.

Underpinning our assessment practices is an agreement that formative assessment is the daily bread and butter of the good primary teacher. Working with individual children, assessing precisely their level of knowledge and understanding, in order to plan the next experience or activity is the assessment that informs a teacher's daily practice. Summative assessment takes place at set times in order to record, very often for the purpose of reporting to parents, governors or other teachers, a child's attainment at a set time. These are the two main strands of assessment throughout this policy document. Records of curriculum coverage must also be kept to prevent repetition and ensure balance but the distinction must be made between the keeping of such records and the assessment of a child's attainment in a particular area. Assessment and planning are inextricably linked. Planning procedures should always take account of the on-going need for assessment.

The following sections are written as succinctly as possible so that new members of staff particularly, have a clear idea of the procedures in place and the expectations of them throughout the school year. A fuller understanding of each set of strategies or procedures will come from discussion with curriculum co-ordinators, the deputy or the headteacher.



Year

1

4.3

Year One autumn term plans

337

Term Autumn

Project Circles / Spheres

Concepts	Skills	Attitudes
<p>Observation of circular pattern + shape in natural + man-made environments - in architecture - domes, towers etc</p> <p>How bubbles are made - affecting their shape, size strength, 20 vs 30 etc</p> <p>The circus - its function, issues of animals + entertainment. Lifestyle of those who travel with circuses.</p> <p>Electricity - circuits how they work + possible uses.</p> <p>Claw wheels</p> <p>History of the wheel</p> <p>Planets - how the moon appears to change shape</p>	<p>Observation reflective + extension/development of our ideas</p> <p>Planning, recording + understanding scientific process + investigation.</p> <p>deductive + hypothetical</p> <p>colour mixing, painting, drawing stitching, printing modelling etc</p> <p>use of non-fiction for reference</p> <p>designing + constructing simple models</p>	<p>Respect for natural and man-made environment.</p> <p>Developing greater understanding how the people live - different cultures.</p> <p>Independence</p> <p>Cooperation</p> <p>Personal responsibility</p> <p>Decision making</p> <p>sensitivity for the needs of others etc</p>

Resources / Visits

Balls - how different balls (materials + structures) will behave differently

variety of
tools/materials

Overlapping
listening
etc

IKEA ?

Local secondary
school for
pottery work
sessions

Spirals

St Paul's Dome
Cabaret Mechanical Theatre
Beardsmans Gallery
National Gallery

4.4 D'Arcy Road mathematics assessment sheets

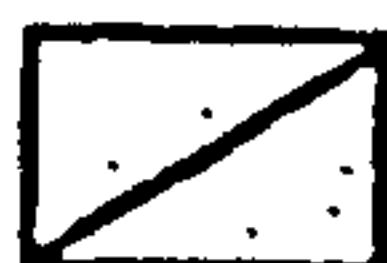
Name of child _____

Date of birth _____

Mathematics Assessment Sheets

To be used in conjunction with the Fleet Policy Document
and the ILEA handbooks children and mathematics and Beam.

Key



Has experience of concept
usually of practical nature.



Has initial understanding of
concept involved.



Practice and recording
satisfactory.



Able to apply concept.

Please write in either black or blue to facilitate photocopying.

NUMBER

Whole numbers

Sorting - choosing a way to sort objects and then explain ☐

Counting members of a set ☐

Matching 1 to 1 ☐

Matching many to 1 ☐

Conservation of sets ☐

Ordering of sets ☐

Working with and ordering numerals 0-5 ☐

Working with and ordering numerals 5-10 ☐

Matching number symbol to set ☐

Discovering the 'empty set' Understands 0 ☐

Ordinal numbers to 10 ☐

Working with and ordering numerals 10-20 ☐

Use of $>$ $<$ for numbers to 10 then to 20 ☐

Odd and even numbers ☐

Ordinal numbers to 20 ☐

Introduction of number line to 100 ☐

Reading, writing, ordering numerals 20-100 ☐

Rounding off to nearest 10 nearest 100 ☐

Reading, writing, ordering numerals 100-1000 ☐

Commutative properties of addition and multiplication e.g. $2+3=5$, $3+2=5$ $6 \times 5=30$, $5 \times 6=30$ ☐

Non commutative properties of subtraction and division e.g. $8-2=6$, $2-8=6$ $12 \div 6=2$, $6 \div 12=2$ ☐

Associative properties of addition and multiplication e.g. $(3+97)+12=3+(97+12)$, $4 \times (2 \times 10)=(4 \times 2) \times 10$ ☐

Addition and subtraction as inverse operations e.g. $5-3=2$, $3+2=5$ ☐

Multiplication and division as inverse operations e.g. $5 \times 6=30$, $30 \div 6=5$ ☐

Prime numbers to 20 ☐

Prime numbers to 100 ☐

Square and triangular numbers ☐

Rectangular numbers ☐

Describing and continuing patterns ☐

Patterns on a 100 square ☐

Number sequences - consecutive, Fibonacci, Pascal's triangle etc ☐

			M 10	PH 1	S	TP 4
MON	WRITING	ASS.	A 6	GROUPS	A	PM GROUPS
			C 4		A	LP 4
			LP 4		N	C 2
TUES	W 10		W 10			C 2
	M 10		M 10			TP 4
	A 6	ASS.	A 6			PM GROUPS
	TP 4	No	TP 4			LP 4
WED						
THUR	W 10		W 10			TP 4
	M 10		M 10			PM GROUPS
	LP 6	PE	LP 6			LP 4
	TP 4		TP 4			
FRI						
	Music	C 2	ASS.			Hall (Dra
		TP 4				
		LP 4				
		+ PH - (6)				

W - WRITING (3 x per week)

M - MATHS (2 x per week)

A - ART (2 x per 2 weeks)

LP - LETTER PATTERNS (1 x per week)

C - CONSTRUCTION / TECHNOLOGY (1 x per 2 weeks)

TP - SCIENCE / GEOG / HIS TOAC ACTIVITY (1 x per week)

PM JOBS.

HOME CORNER (4)

SAND (2) MUSIC

GAMES

PAINTING

TAPES

TABLE = for

CONSTRUCTION

finishing

experiment

offer ideas

TP (4)

BOOK MAKING

LP (4)

does fine. lot
not want to have
I need to have
who does what
when!

Good cos
they is
hard work
6 sessions
for me
+ it was
great

GROUP ACTIVITIES

ART: Stories in poetry - R.R. Hood +
other stories
Designing + making ship exterior
Finish sculptures

TECHNOLOGY: Shadow puppets (+ new theatre?)

SCIENCE: Shadows - formation + direction
Sun if poss

MATHS: Odd + Even - investigation

ENGLISH: Changing stories (+ publishing)
Jokes (joke bk)
Tunnels (new format? - ask
children)

OTHER

Class mats - greater/less

Letter pattern 'ou'

Vowels

PE - Apparatus

Drama - Develop story of Q of Sh

Poem

Topic vocab bk

Special bks.

Practice songs

are. Quilt table etc labels Shadow puppets?

Odd/even invy Big numbers

Letter pattern sheet 'ou' Tape

WVA Tuesday.

New poem for collection 342
Special books - select
joke paper? *Pics of boats
Pm - "jobs"
Who's done construction? - display
diagrams?
Grant no's
receipts
label for notebook.
*Resources for shadow puppets
Linda - tacky back no's
Make activity
*Cleaning up job with (xx) ↓

9 → 9.10 - readers
(paired)

9.10 → 10.30 -
Registration
Class Journal

AM GROUPS - DISCUSS ART

→ Expression = faces/
hands/
gesture

- WRITERS (10) ← ... THEN
- MATHS (10) (START OFF) ↑ (LINDA)
- ART (6) (FINISHING)
- TOPIC-SHADOWS (4)

x 2 Sessions

PM GROUPS - DISCUSS
LETTER PATTERN & CON

- CONSTRUCTION (4) - DIAGRAMS
- SHADOWS (4) (ASK LINDA FOR RESOURCES)
- LPATTERN (4) (LINDA)

*** SCULPTURES ***
PM JOBS
MAKING SHIP - ME

SQ'D PAPER
TACKY BACK →
+ STICK ON - USE
WASHABLE
PENS TO
MARK WHO
DOES WHAT

Which part of our class
do you look after?
~~What do you look after?~~

					
Mursalin					
Georgia					
Julia					
Samara					
Joe					
Thomas					
etc					

Seh - not saying words out loud as he writes

- going back and reading from beginning although not saying words - seems to be reading in head (confirmed this when he read to me)
- holding pencil awkwardly
- difficult to see any spaces - not using finger to help.

BT - saying words + accentuating
Some letter formation is not conventional
eg g=g

Sunderp - monitoring words as he writes
- seems to be keeping track of what he's writing
- reading himself from beginning once he's got near end (when reminded)
- l:i not accurate - when re-reads - appears to self correct + put extra words.

Leigh - putting letters in reverse order ie 'r' first then 'f'
looking up at down at the page
using finger after a while for space.

Fitzjohn's Primary School

Assessment and Records Policy

Purposes of assessment and record keeping:

- Formative - should help the teacher to decide how a pupil's learning should be taken forward.
- Summative - should provide evidence of the achievements of a pupil (knowledge, skills, concepts, attitudes).
- Evaluative - should be used to indicate where there needs to be further effort, resources, changes in curriculum, etc., by giving comparative information about pupils' achievements.
- Informative - should help to inform parents, receiving teacher, head and support staff how the pupil is doing; should help to inform wider community about the school.

Planning pupil progress:

This is achieved through adherence to school curriculum policies, the use of the National Curriculum in the planning stages of topics/projects, and also reference to previous assessments and records.

Managing assessment:

The careful planning of work for pupils facilitates the management of continuous assessment. It is achieved by various means:

- observation
- recording
- questioning
- active listening
- discussion with other members of staff

In-school moderation:

We shall organise bi-annual sessions whereby teaching staff examine samples of work at different levels to ensure that Statements of Attainment are being interpreted in a consistent way.

Class records:

All the following records will be kept in a file in the classroom.

At the beginning of each new academic year these records will be passed on to the receiving teacher.

- i) Class teachers will prepare a project planning sheet (PPS), showing the work to be covered within the project over a period of a half term / term. The work will be broken down into curriculum areas. A flow chart showing the various threads and links within the project will be included. By the end of the project all work actually covered should be highlighted, and any additional work covered should be added to the PPS and highlighted. All other work (i.e. not linked to the project) may be included on the reverse side of the PPS, or recorded on a separate sheet.
- ii) National Curriculum attainment target sheets (NCATs) for mathematics, science, English, history, geography and technology will be used to show attainment targets (ATs) covered in class for the current school year. ATs should be highlighted, initialled and dated when work has been introduced and consolidated.

N.B. In time NCAT sheets for all core and foundation subjects will be used. (Not applicable to Reception class).

Individual child records:

All the following records will be kept in a concertina file in the classroom.

At the beginning of each new academic year these individual child records will be passed on to the receiving teacher.

All pupils' records are confidential, and as such, are only accessible to members of the school staff involved with the pupils at school, and parents.

- i) NCATs for mathematics, science and English will be used to record the ATs achieved by the pupil. The AT will be highlighted and initialled by the teacher, and given the date that the highlighting and initialling are done.

N.B. NCAT sheets are not applicable to Reception class.

- ii) Individual folders containing samples of work, which provide evidence of the pupil's achievements, to support teachers' assessment of the pupil, will be compiled. Each term, at least 1 or 2 pieces of work showing achievements in each of the core curriculum subjects, will be included.

It may not always be appropriate to include samples from all the foundation subjects each term. All samples of work will have a note of the curriculum subject name, AT number and level number for which they are providing evidence, in addition to the teacher's initials and the date on which the activity was carried out.

N.B. Samples may sometimes show that a pupil is working towards an AT.

- iii) Where samples are redundant, they can then be put with the children's records, upstairs. Current exercise books will be passed on to the receiving teacher, but all project books will be taken home by the pupil at the end of the year.
- iv) Individual cumulative comment sheets will be used for each pupil. These sheets may be used by all members of the school staff involved with the pupils at school. They will provide an opportunity for recording special emotional, social or academic problems, set backs or achievements.

Reporting pupils' progress and attainment:

- i) An annual end of year report for parents, which satisfies the N.C.C. requirements, will be written. This report will include a space for parents and children to make comments.
- ii) Any child that changes school is provided, if appropriate, with their past work (samples), and the new school is given a 1 sheet report form, completed by the child's previous teacher. For secondary transfer, the new school is provided with an end of year report.

N.B. The format of this report will be different for the Reception class.

- iii) Reception class pupils' individual achievement and progress will be recorded on the Reception Record. This will be used initially in the first 2 weeks of the pupil's school career, in conference with the pupil's parents, and thereafter, updated regularly.
- iv) Instrumental music teachers will prepare a termly record of the pupil's achievements and progress, a copy of which will be kept in the concertina file in the classroom.
- v) A bi-annual parent-teacher meeting is held: one during the Autumn term, the other during the Summer term. These meetings are to provide both parent and teacher the opportunity to discuss progress made, any possible weaknesses, and to suggest where to go next, to ensure the pupil's progress.

Summary

(Appropriate to all pupils unless stated in brackets)

Class records:

(Not reception class)

Project Planning Sheet

NCAT sheets:

- mathematics
- science
- English
- history
- geography
- technology

Child records:

(Not reception class)

NCAT sheets:

- mathematics
- science
- English

Samples of work

Cumulative comment sheets

Annual report

(Reception only)

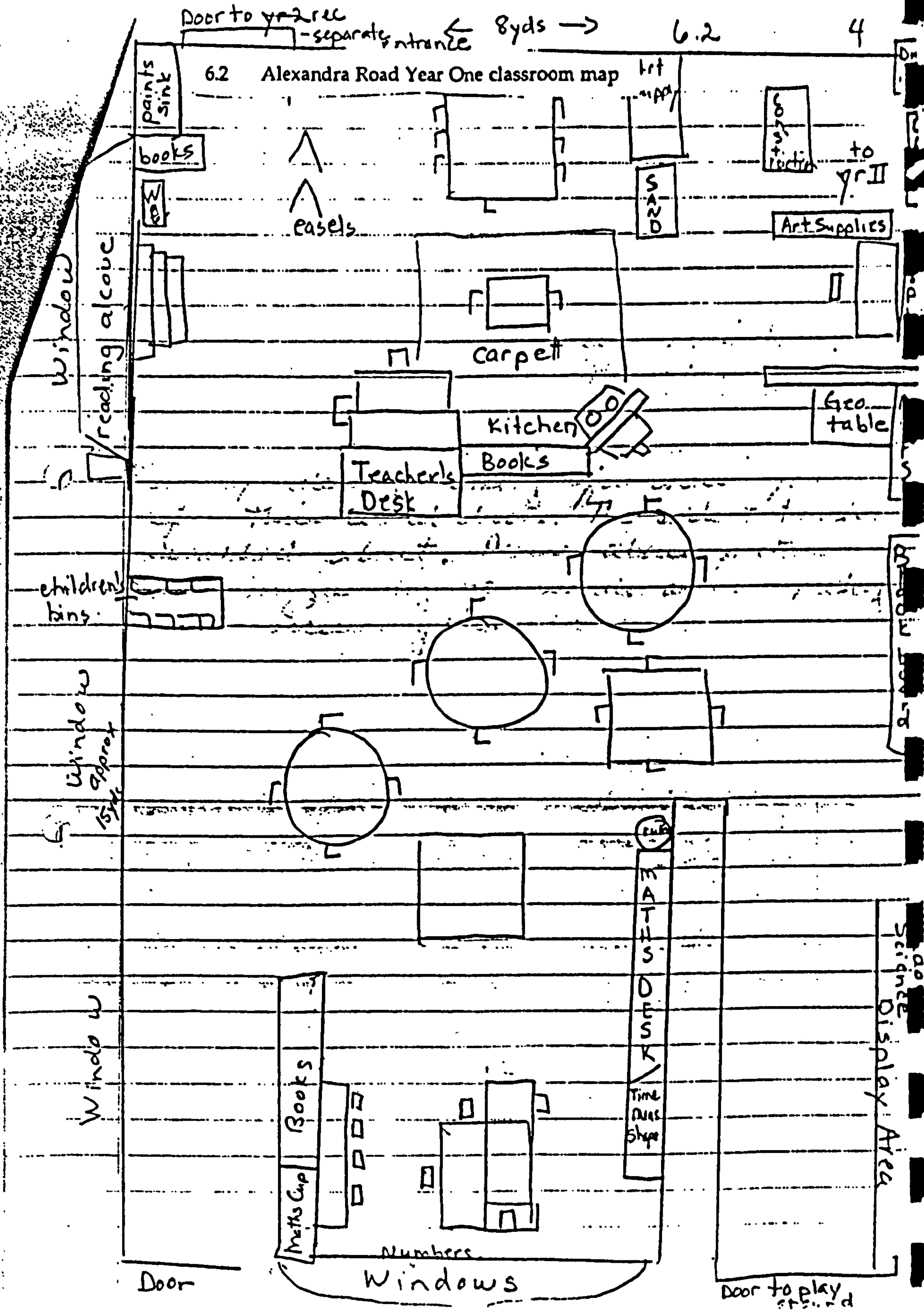
Reception record

(As appropriate)

Instrument record

(As appropriate)

Special needs



	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
9		Handwriting	Handwriting	TV	SPM
9.30	PE (HALL)				
10		Language groups	Project	language groups	Assembly
	Liz	Mattie	Liz	Mattie	Liz
10.30	SPM		INFANT ASSEMBLY	JUNIOR ASSEMBLY	story (MCHC)
10.45	X X X X X X X X X X X X X X X X				
	(CSN) Free read	Free read	Free read	Free read	(CSN) Free read
11.50	NEWS	Project	MUSIC	Cook Sew project	language groups
	Mattie	Liz	Val	Val	Mattie
12.00	INFANT ASSEMBLY				
1.20	X X X X X X X X X X X X X X X X				
2.00	Project	Project	Games	Project	choose + small group work
	Val	(Hall) Drama / movement	Project	Val	SPM
2.30					
2.45	PLAY DUTY	X X X X X X X X X X X X X X X X			PLAY DUTY
3.20	Mattie	STORY	STORY	STORY	SHOW
	(MCHC)	SPM			

Monday 6/12

- 1 PE (Quiet run) (A) Work freely - use hands & feet I SPM
- 2 Free read (mattie) I news
- 3 (1) (4) Story mattie

Tuesday 7/12

- 1 Maths numbers/cards I thank you letter Mattie phonics Me - work cards
- 2 Free read I (1)
- 3 Rehearse Noah's Ark I M & M continue with movement
- 4 Story (ships)

quality quaint quantity question
quack quarter quartz quick
queen great quiet quilt
queer
quod quiz

Wednesday 8/12

- 1 Handwriting qu I (1)
- 2 Free read I music
- 3 Games I rehearse Noah's Ark (4) Story (1)

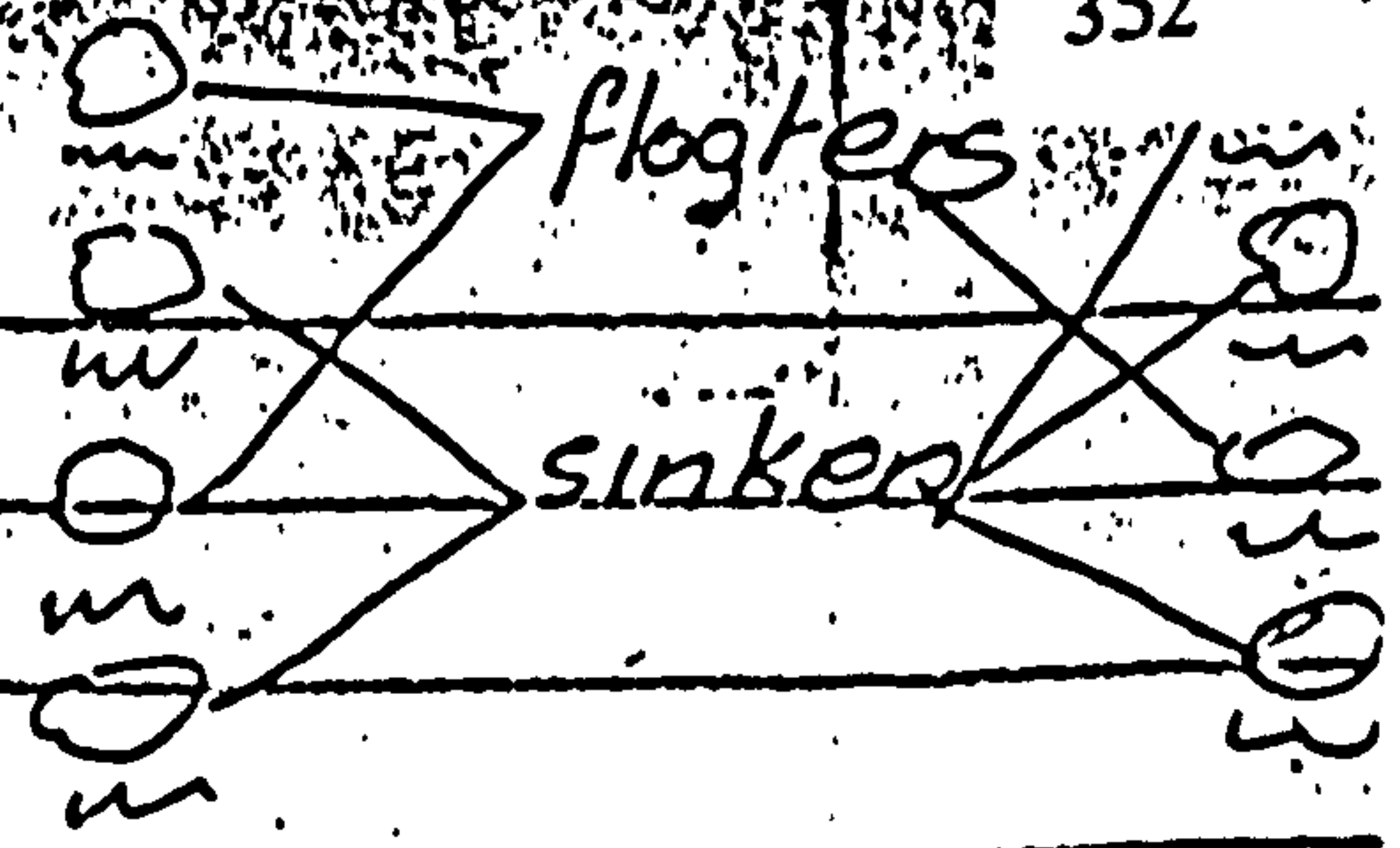
Thursday 9/12

- (1) TV I Mattie boats rain cycle
fountain water Me - rain cycle
- (2) Look / See / (1) + free read
- (3) (1) (4) Story boats

Friday 10/12

- (1) SPM / Assembly / Story Liz
- (2) Mattie Language Me -
- (4) (3) Choose

1 float sink - record chart



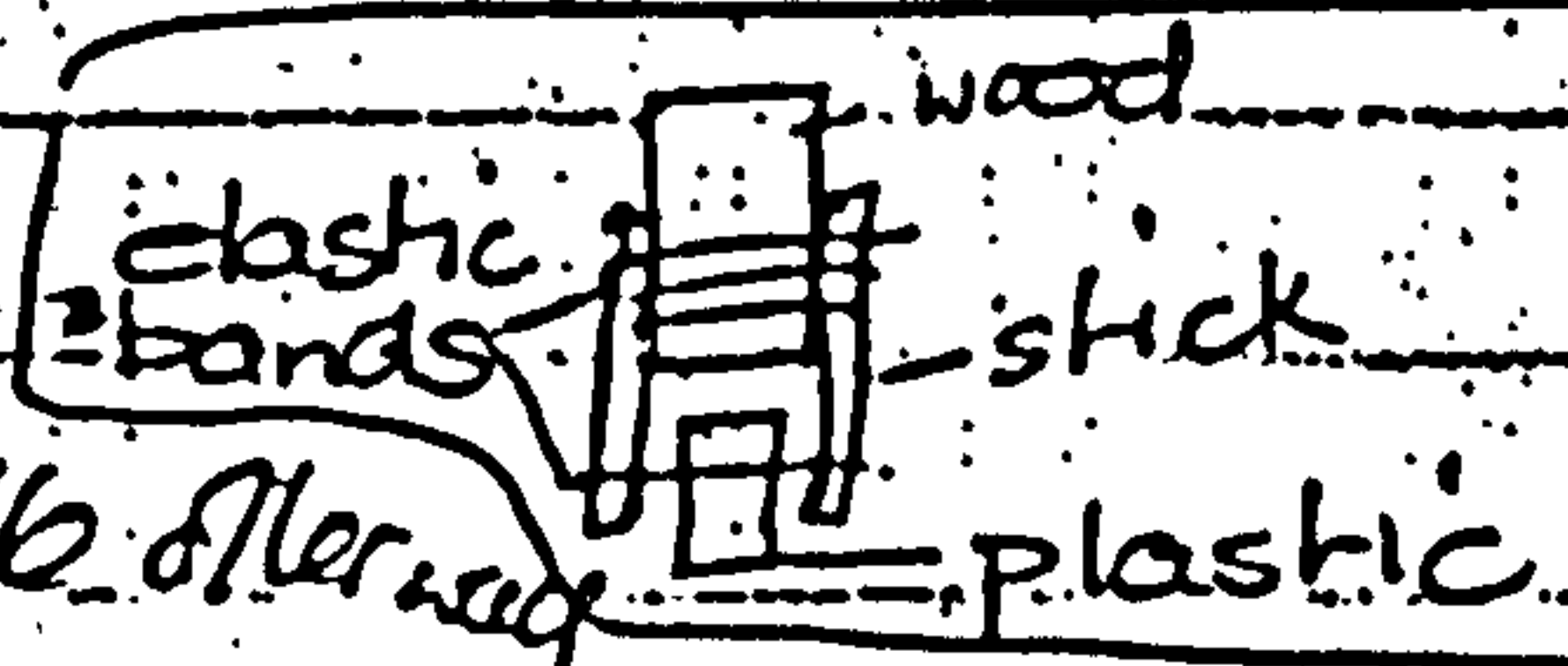
2 Weigh lump plasticine 200g - test (sink)
make into a boat that floats

3 Wax undersea pictures + wash

4 Powder paint mix yellow blue yellow → green → blue
to make wash background

Make silhouettes of undersea & stick on

5 Make paddle boat



do labelled diagram

What happens if first paddle other way
change size of paddle
add load to boat

6 Draw and write about 1 kind of boat

- 1 Sailing boat
- 2 Power boat
- 3 Ocean liner
- 4 Fishing boat
- 5 Frigate

- 6 Container ship
- 7 Tug boat
- 8 Paddle Steamer
- 9 Canoes
- 10 Ferry boat
- 11 Hover craft
- 12 Early ships

7 Make your own model ship from junk

Handwriting

1. Patterns

uuuuu

mmmm

www

cccc

eeee

2. Diagonal Joins a c d e h i k l m n t u - join with d

(a) they join to i u y with pointed tops

ci ci ci ci au au ay ay

ai ai ai ai cu cu dy dy

di di di du du ey ey

ri ri ri hu hu ky ky

hi hi hi lu lu ly ly

li li li mu mu ny ny

mi mi mi nu nu my my

ti ti ti tu tu

(b) they join to n m r with arched tops

in in in un un ur ur

un un un um um ur ur

an an an am am ar ar

(c) they join to c a o d g q by going right over l

ic ia io id ig iq

cc ea eo ed eg eq

3 s can be joined ass best

4 Don't join to * and z

next mize dozen text

Phonics

✓ sh

✓ st

✓ ch

✓ wh

✓ th

Handwriting

✓ c v o a

✓ b h p

✓ r n m

✓ v w sc

✓ d g q

u y

i t k

f j t

z e s

qu qu

GAMES

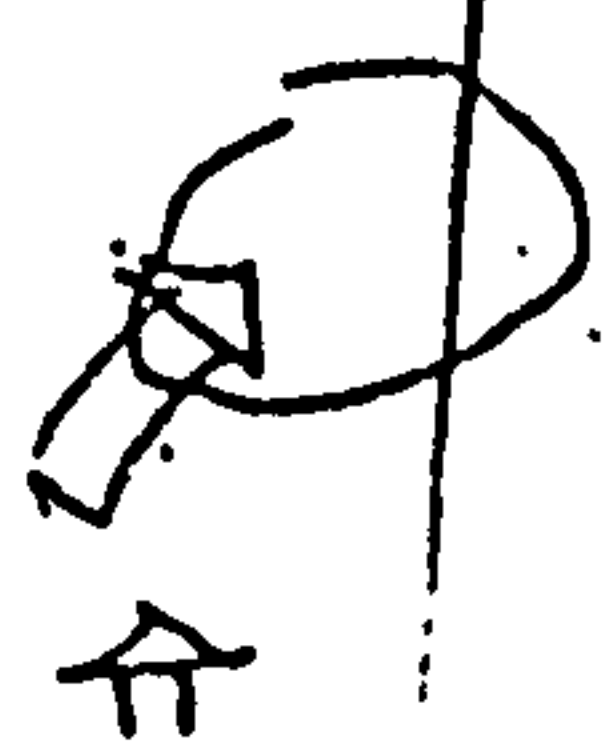
- 11 Pattern Bingo Each player 1 card + 20 counters dark reading of
 caller calls out by red (last brackets) after 20 words
 caller reads with brackets (a red counter) - red counter
 make pattern - balance red counter child reads
- 12 Whiskers 2 cards
 each player has 3 cards picture facing ask where
 is pill (pill can etc) other touches correct side of card
 if correct wins card
- 13 Brick Wall 1 group make words & find on back card making 36
 game - bricks dealt to up to 4 players place in pack letter up
 1st player tries to place top card then stacks on back card & so on
 more counter on score card that many horses
- 14 Find the Other Cards
 child finds letters & writes out words
 double consistency at begin & end of words
- 15 Brick Wall 1
 Use as brick wall 1
 double consistency according to
- 16 Noun Cards 1
 players stand cards picture facing ask where
 is boy other has to choose which one & if
 correct wins card
 read under of simple phrases
- 17 Sentence Cards 1
 2 players 6 cards each stood up - 1 moves 1st card
 forward other has to read - wins card if correct
 read words in sentence
- 18 Sense & Nonsense 1
 child chooses proper endings & writes out
 read words in sentence
- 19 Fable Cards child puts cards in sequence & reads then
 turns over & writes irregular words in book
 Have one word / card
 decoding irregular words
- 20 Colour Sounds
- 21 Snake game
- 22 Noun Cards 1
- 23 Sentence Cards 1
- 24 Sense & Nonsense 1
- 25 Lazy E exercise
- 26 Noun Cards 1
- 27 Snake game 1

Water

Term Oct - Xmas 1993

Maths	English	Science	Geog/Hist	Art	RE	PE
Venn diagrams Noah's Ark	Sequencing story Noah's Ark	Boats - sinking floating	Rain-water cycle	bridge design Noah's ark story	Noah's Ark story	Noah's Ark story
	A rainy day Adventure	Rain cycle	sequence hist. stories	Mask making cutting "		
water clocks		Water experiments finds own level freeze boil expand float/sink pumps water mills	History of boats ways of travelling in/on water	water pictures washes with silhouettes boats		
		erosion sand plankton water making bubbles	erosion	close obs digs shells etc		
measuring for DT projects	What do we need water for class display	insulation cooling temperature		make a paddle boat		
	Write instructions to make paddle boat	Write how paddle boat works	study rafting Bangladesh Africa/Asia		Water's source of life	

water cycle do performance with spaces for writing



HOLY TRINITY C.E. PRIMARY SCHOOL

ANNUAL REPORT OF THE HEADTEACHER TO THE GOVERNORS 1992/93

1. Our revised Booklet was printed in December, 1992, and contains all details of Holy Trinity School.

2. Our roll is 150 and shows a healthy climb from last year's 130. Until fairly recently we experienced a fluctuating roll and high turnover. This year that problem has not been apparent. Children and their families do come and go from the district, due to overseas exchange, business, academic or being homeless. The latter are housed in Fitzjohn's Lodge. Many are refugees, who need lots of help with English.

However, the 1992/93 roll has stabilized and our September intake is full at 13, with 12 more for January, making c165.

In September, 1992, we introduced a simple red/blue uniform, which has been very successful and attracted more parents.

PARENTS AND COMMUNITY LINKS

During 1992/93, we held Open House, to which everyone connected with the school was invited. During each term each teacher invites parents in to discuss their child's progress and to help complete the children's Primary Learning Record. Parents and staff also meet informally.

During 1992/93 the HTSA met to promote fund raising events, arrange social activities and to welcome new parents. We hope more parents will come and support the Association. This year they arranged a Disco, combined with a social fund raising evening.

Each year our Harvest Festival collection is given to the Simon Community.

In 1992/93 we raised money for the NSPCC.

Our other community links are with S. H. High School for Girls. Fourth and Sixth year girls come in on observation, one a week.

LINKS WITH SOCIAL SERVICES

T. F. , is our Education Social Worker, and is very supportive of Holy Trinity School and the different needs of its community.

Th monitors the class registers for children's absence, lateness and does home visits.

Cont:

APPRAISAL

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Staff Appraisal started this year. Diana Burrows and Neil Marlow are the Appraisers.

CURRICULUM

- a. Our aim is to provide a child-centred Curriculum to meet the needs of all the children.
- b. To meet the requirements of the National Curriculum.
- c. To establish policies and guidelines for each subject.
- d. To ensure continuity.

CURRICULUM CO-ORDINATORS

In 1992/93, Sarah Webster directed Language Inset.

In 1992/93, John Barrs developed Art/Craft and CDT.

Both John Barrs and Neil Marlow are involved in an exciting Software Project for 1993/94. Our present eight year olds (Yr. 3) have one wordprocessor each, as part of a project. If it succeeds, and it involves home/school liaison, we keep the Software.

CLASSROOM ORGANISATION

The staff continually seek to create well planned and imaginatively displayed classrooms. Within each room, areas are planned for different activities. As certain classroom furniture is old I have started re-equipping classrooms, beginning with the Reception. But in addition, I feel the whole school interior needs new furniture and decoration, to enhance the working conditions of children and staff.

The teachers plan the approach to the curriculum by class projects, which are based on the National Curriculum and the child's own experience. The basic learning skills are essential, but should not be taught in isolation. In my reports of 1989/90 and 91/92, I stated that not all aspects of the curriculum can be included in a project altogether and should not be 'forced into it'. Certain subjects may appear isolated from the project, but will be part of the ongoing school development plan for that subject. Projects may be given an historical approach during one term, and later other curriculum areas dominate.

As demands of the National Curriculum increase teachers wonder how much longer we can sustain the project approach. Will we be teaching subjects in isolation? There is a time to teach subjects in isolation, and to show a rich cross curricular approach.

Cont:

*HOLY TRINITY SCH.
ASSESSMENT POLICY.*

1. Planning

Detailed and effective planning and organisation of pupils' work throughout the year is a major determinant of the success of assessment techniques and procedures and of the pupils' development as learners. Assessment should be linked to planning and learning intentions and should enable teachers to match pupils' needs.

Each class has a 'planning folder' which includes ^{Modbury} topic plans and weekly plans from the previous years of that particular class. A planning sheet will be completed for every topic undertaken (one every half a term or every term depending on the length of the topic). The planning sheet contains both topic and non-topic work. At the end of a topic a brief evaluation will be written.

2. Record-Keeping and Assessment

Each class teacher will have the 'Holy Trinity School National Curriculum Coverage Booklet'. During the year (thus an ongoing record) the teacher will highlight with a vertical line, statements of attainment covered with the class. A statement need only be highlighted once in a year. Every class has its own highlighting colour. At the end of the year the booklet will be passed on to the following teacher, who can examine the coverage in order to aid his/her planning and will then add to the booklet with his/her own class colour highlighter when he/she covers a particular statement of attainment.

This booklet shows what has been taught. It does not show what has actually been learnt by individual children. This will be shown using parts of the Primary Learning Record.

In the first term, after a few weeks at school, a conference will be held with every child and the children's parents (on separate occasions) in order to complete Part A of the buff forms. The conference with parents will be concerned with the children's interest and enthusiasm for school, attitude to work, particular interests or hobbies at home and the way the child has settled into the new year at school. The child conference will cover similar areas as well as finding out what the child regards as his/her favourite subjects at school and the areas in which he/she feels they are performing best in and aspects, which are felt need working on.

In the second term Part B of the buff forms will be completed giving a detailed breakdown of the child's performance in every curriculum area (except for classes, who are involved in SATs, where this testing will take the place of Part B).

Cont:

In the Summer Term a final report will be made of the child's progress and performance at school and a copy sent to parents. This may be simply Part C of the buff forms completed, or a photocopy of Part B and the final page of Part C, if it is felt the information in Part B is an accurate representation of that child's abilities. 361

In order to assist the teacher in this record-keeping process there are a number of 'tools' available to make this formative assessment easier to complete. Firstly each core subject has a 'Diary of Observations', which is to be used by the teacher, if they wish, to make notes about the children's progress, abilities, concepts understood, concepts not understood, particular difficulties, strengths etc. We would insist that the Reading Section of the Language Diary is completed regularly, using a piece of A4 lined paper inserted in the diary for noting books read to the teacher and comments made, leaving the blank space on the form for general comments on progress.

The other elements of the 'Language Diary' and also the 'Science and Maths Diaries' should be used only when and if the teacher finds it necessary.

Another tool at the teacher's disposal is sampling. To help in the review of a child's writing development we recommend that every term a writing sample is taken (a minimum of two samples a year) and included in the child's 'Language Observation and Samples' sheet. Stapled to this sample should be the writing sample sheet, which can be found in the staffroom and on this should say the background to this piece of writing, the assistance that the child had and any relevant comments. By taking this writing sample at least twice during the year the teacher will be able to review the children's progress and have evidence of that progress.

If the teacher so wishes he/she can also carry out Reading, Maths and Science samples, using the guidelines in the 'Observations and Samples' sheet.

At the end of the school year all parts of the Primary Learning Record should be passed on to the following teacher. Once this has been read the records should be separated into each child's record file in the resource room.

3. Best Work Folders

Every child should, in the classroom, have a 'Best Work Folder' (a pocket file). In this folder the children should be encouraged to keep:-

- | | | | |
|---------|---|----|-----------------------------------|
| Infants | - | 1. | Their best piece of written work. |
| | | 2. | " " " " maths work. |
| | | 3. | " " " " art work. |
| | | 4. | " " " " other work. |

Cont:

- Juniors -
1. Their best piece of written work.
 2. " " " " maths work.
 3. " " " " art work.
 4. " " " " science work.
 5. " " " " other work.

This work represents the child's best work in these areas so it will be frequently changed when the child surpasses the work in the folder and so swaps it over. Towards the end of the school year the best work in this folder will be transferred to a piece of A2 sugar-paper folded in half. Each child will be involved in the selection process throughout the year, and will also be involved in the mounting, positioning and labelling of their work on their page at the end of the year. These pages will be passed on to the next teacher. In Year 6, the pages from previous years will be joined together to give each child a portfolio of his/her progress through the school.

4. Records - Accessibility

All aspects of the PLR should be accessible in the classroom for use by any members of staff working with the children. All teaching staff working with the child should be encouraged to add to the records. Non-teaching staff in certain circumstances could add to the child's reading record.

E N G L I S H	TOPIC WORK	Discussion - learning from each other, sharing ideas, listening and contributing	AT1
		Gaining information from non-fiction books - reading + being read to.	AT2
		Understand how descriptive writing can inform others	AT3
		Develop writing skills	AT3,4
M A T H S	NON- TOPIC WORK	Continue phonic work - aim to complete alphabet - knowledge of all letter sounds. Follow up Words + pictures	AT4,5
		Correct formation of individual letters - Nelson handwriting.	AT5
		Develop writing through weekly news.	AT3
		Develop reading skills	AT2
S C I E N	TW	Shape + space - aim to learn names of 2-D and 3-D shapes	AT4
		- use shapes to make pictures, models.	AT1,4
		Understand how directions can be given	AT1,2
		Concept of change (money) when shopping	AT5
	NTW	Collecting data about local area - building use etc	AT2
		Continue developing addition and subtraction skills	
		+ knowledge of addition + subtraction Facts up to 10.	
	TW	Concept of weathering of bricks	AT3
		Develop testing skills - walls - which is strongest?	AT1
		Learn about how bricks are made + what from.	AT4

RECORDING / ASSESSMENT

EVALUATION

Topic folders

Class books

SPMG - shape

Verbal

Display

SPMG

Topic folders

English	Maths	Science
<p>News written + read to group</p> <p>Write about an animal - descriptive writing of him, where it lives</p> <p>Nelson handwriting</p> <p>Ability reading time, stories etc</p> <p>Sound 'ch'</p>	<p>Number work - SPMG</p> <p>Develop concept of shopping - money buying 1/2 pence + pence using toy money.</p>	<p>Introduction to topic of living things - discuss what is alive + why.</p> <p>Choose one animal each to find out about - discuss how it lives</p>

IT	Find Spot - adventure game - level 1
DT	Design + make topic folders.

Hist	
------	--

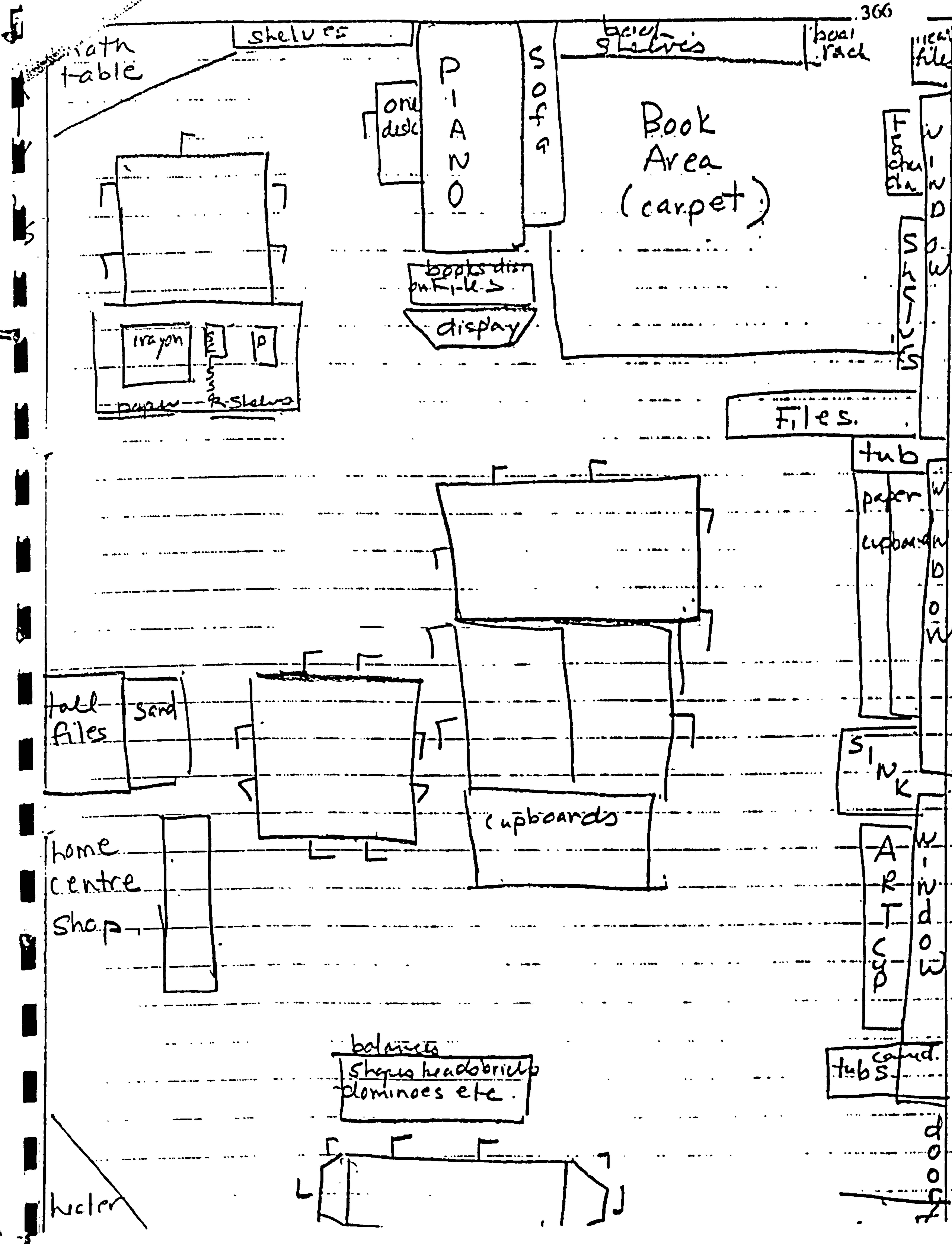
Coog	
------	--

Art	<p>Continue making dough food, painting when dry.</p> <p>Pictures of living things.</p>
-----	---

RE	Let's move - music + movement
----	-------------------------------

Music	<p>Music lesson</p> <p>Hymn practice</p>
-------	--

RE	Continue discussions about loss - story of lost coin.
----	---



8/9/93 Woorh - read to her

367

14/9 The tree house - good 1-1

21/9 the egg -

28/9 If you meet a dragon

5/10 Go, go, go - pointed to words.

12/10 Lost - read quite well

19/10 Hide + seek.

2/11 My vest is white - good try.

16/11 Dinner's ready Jessie! book 1-1, recognised 'i' and 'a'

23/11 Boo-hoo -

7/12 Lets go - recognised 'the' on some pages.

10/1/94 Wed Better make a list - recognised the word 'today' and 'we' but we had to read together

17/1/94 Lost - Read this well
The Ghost - Read this well

18/1/94 The haunted house - read well, quite good 1-1

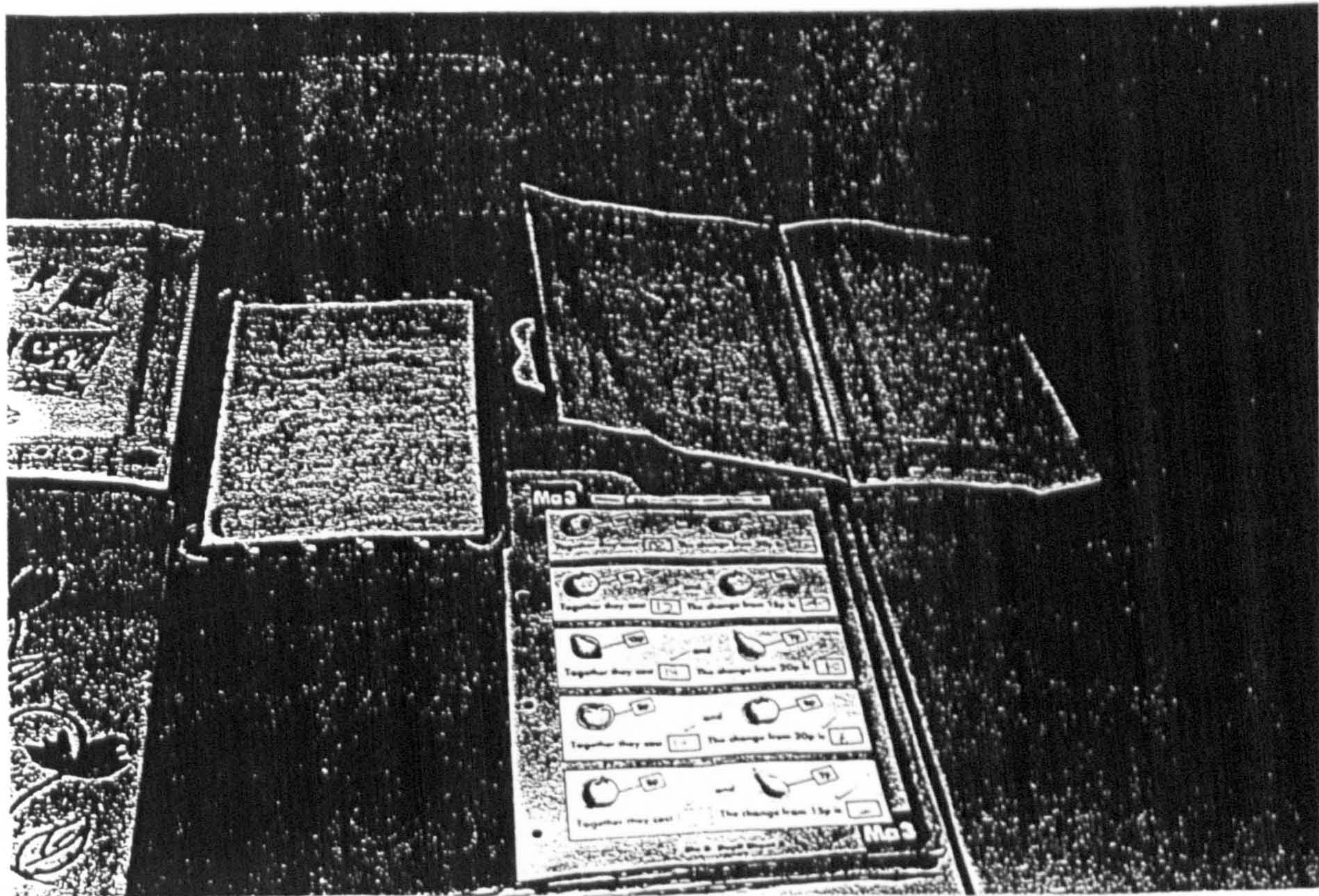
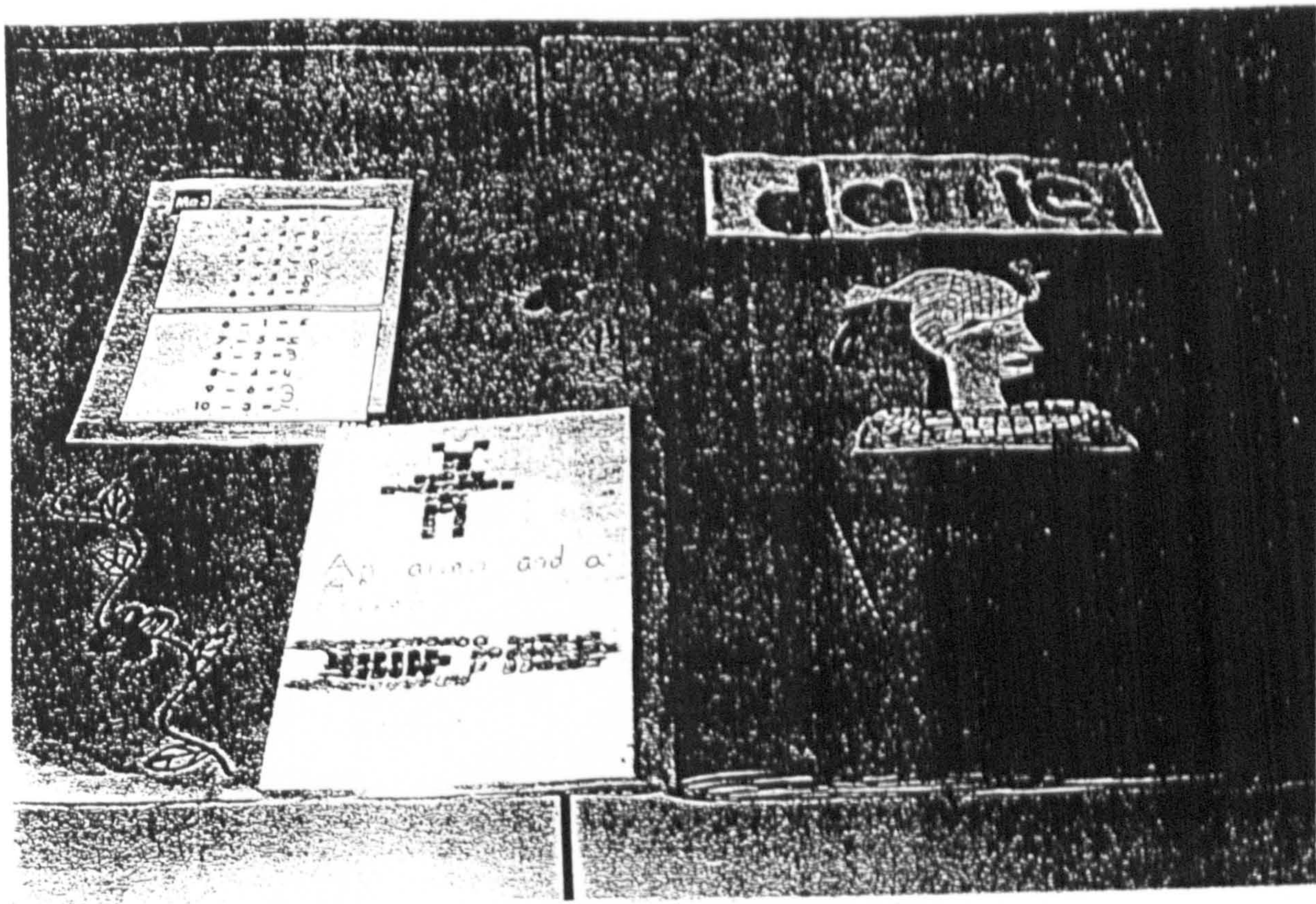
25/1/94 Spot Goes on Holiday - read together, used picture clues.

21/2/94 Little Pig (Recognized all the repeated sentences)

22/2 Three little ducks - recognised a few v. repetitive words.

7/3/94 The Night Train (Very good attempt clay
read this book well)

8/3 Who lives here - read easily



APPENDIX B

St. Michael's RC School Case Study Setting One

Sub-Appendix B

Case Study One -- St. Michael's RC Primary

As the research review has shown, formative assessment is a complex practice involving skills deeply embedded in more than one aspect of teacher work. Formative strategies can be found within the processes of planning, teaching and assessing. Relevant data on planning can be derived from document analysis. Interviews and questionnaires can also be analysed to further illustrate formative practice. However, much of the formative assessment process involves teacher-pupil interaction through language. As a result, observation notes and the analysis of classroom discourse was used to illustrate the teacher's practice. The intent of the case study is not to appraise the teacher's work or the school in anyway; rather it is to accurately describe the formative practice within the context of the school.

St Michael's RC Primary School

St. Michael's RC Primary School is a Voluntary Aided Primary school located in inner London near Covent Garden. It was established first in 1873. The original three-story building is still maintained and used. There are seven separate classrooms, a television room, school gym/ hall and carpeted library resource area. There were 201 children on the school roll during the data collection period coming from a variety of socio-economic and ethnic backgrounds. The head teacher reported that 75 per cent of pupils are bilingual. Most of the students live in high-rise flats or council housing in the area, with their parents working in the local service industry. Information from teachers and data from school documents, including the minutes of staff meetings, indicated that the students require a great deal of academic support to develop basic academic skills. The year two teacher said that for her, too much time was spent on "parenting and control". School staff included a head teacher, a deputy head with a full-time classroom responsibility, and six other full-time teachers.

At the time of data collection, there was a part-time section 11 teacher (for new students from other non-English-speaking countries in the Commonwealth), and one part-time teacher working with children with Special Needs, as well as for curriculum release time. . . There were five mealtime supervisors who served and monitored school dinners. Approximately 40 students received free school meals.

School Context and Assessment

At the time of data collection, the school did not yet have a policy on assessment or a co-ordinator. However, the head teacher, the year six teacher and the year two teacher had recently taken a day-long course on teacher assessment at the Institute of Education with Shirley Clarke (interviewed for Chapter One on INSET). The school staff had devoted three staff meetings to the topic of assessment in the autumn term, including a moderation meeting to discuss and assess samples of work. The minutes of the staff meetings provide a good source of evidence as to the teachers' feelings about developing new assessment skills. (See Sub-Appendix B.1)

Wednesday, October 13th, 1993

1. Assessing sample of children's work individually (8 in total).
2. Working in groups to agree on levels of Attainment for each sample.
3. Discussion of groups' assessments.

Conclusions:

1. Difficult to assess samples of work without knowing what went before, instructions given by the teacher, or the context for the sample of work.
2. Overlap between ATs and Statements of Attainment was marked.
3. Working together in groups (Infant & Junior teachers in each group, helped staff to share ideas and focus on the salient parts of the work.)

4. It became obvious of need for more evidence/samples of work to be able to form accurate assessments.

November 3, 1993,

"J. [the head] outlined his meeting on Assessment [at the Institute], where many aspects of assessment were criticised but gave no concrete suggestions which could be used in class." [The aspects of assessment referred to is a nine-point list of recommendations suggested by the Shirley Clarke seminar. See AppendixB.7]

Later in the document the minutes read:

Establishment of assessment as a constant feature of classroom procedures in relation to (1) teacher assessment and SATs. Staff discussed what exactly is "evidence", as well as formative & summative assessment, and records of achievement. Staff discussed planning- how it could be streamlined and/or be put together with assessment. ... Staff were given details of an Inset course on Assessment"

This data implies that the staff was at the initial stages of developing more articulate ideas about formative assessment skills at the school and classroom level. It could be suggested that impetus for the discussion of assessment strategies and skills had been the National Curriculum Assessment requirements, for the Assessment courses provided by the LEA or the Institute had been attended by the staff only as a result of the pressing needs of teachers conducting Teacher Assessment and SATs.

The Year Six teacher had also attended the day course with Shirley Clarke. In interview, she felt that the "school has been working hard on planning but it doesn't feed into assessment at all yet." What she wanted to learn was how to conduct better teacher assessment while coping with 30 children in the class. She had heard about observation strategies but felt that the children at their school were "so disadvantaged, they need constant supervision"

and that such strategies were not possible. She felt checklists or a scheme of assessment that could be carried on while correcting and teaching was what this school wanted.

Information on Assessment from the Headteacher Interview

The head teacher, Mr J. McCauley, had been a teacher for 23 years and a head teacher for four years. He had been involved, as a deputy head in his previous school, in efforts to develop school effectiveness. He had been appointed at the previous school, he said, to bring the school “up to standard”. To do so, he was sent on training courses in teacher development, and got funds to improve the information technology equipment. He was in charge of working with the teachers to write new school policies on assessment and curriculum and to help implement the changes. He was hired at St. Michael’s to do the same kind of staff development. He was very clear to explain that, “You have to be careful how to initiate change. You can’t effect change unless people are on side.” He was initially enthusiastic about the National Curriculum and called it a “revolution in education”. He believed in teachers “formalising what they do” and being more accountable so that there is a “base for people to work from”. He felt, however, that the major flaw of the curriculum was that there was too much to cover, it was too prescriptive and was a knowledge-based rather than a skill-based curriculum. He said, “You just can’t do it all.” The writing down of everything is a major detractor for teachers. He felt that teachers became “resentful” that so much time was devoted to record-keeping.

On his questionnaire, he noted that his teachers felt great pressure from the curriculum, with not enough time to plan and not enough pay to make it all worthwhile. His role in the implementation of the curriculum, he reported, was to help in planning and facilitating the changes. He noted that teacher appraisal should be part of this implementation. This comment may help to explain why the relationship between the teachers and the head appeared under

strain at the school. In the other case study schools, the head teachers reported that part of their work during the implementation of the curriculum and the change necessitated by it, was to protect their teachers from too much change too fast, whereas this head was concerned with appraising and evaluating teacher performance while they were in the process of making the changes. They felt judged rather than protected by their head. Though he had studied the change process, he had not been, thus far, very successful in helping his teachers see the need for change. As a result, they were wary of any new policies. They interpreted the head's requirement of two staff meetings a week and the policy of handing in weekly plans as a means of checking up on them. The year two teacher remarked that they saw the presence of a researcher studying assessment as yet another example of the head's intent to watch and control them. The head himself assessed the reading of each child in the school. He kept his own notes of the assessment and used the information to "see how the school was doing", in other words, for summative purposes. He said he did share the information with teachers, "if there was a problem".

School Assessment Policy

Although the school had no written assessment policy, the head teacher had instigated several steps that year which would, he hoped, clarify the teachers' thinking about assessment and improve their understanding of it, so that they could draft a policy at the start of the next school year. During the year when data was collected for this research, he said that, "basic assessment is our main focus." As a start, an evaluation section had been added to the weekly planning sheets. Coverage of the National Curriculum and the Assessment of the curriculum were dealt with by requiring the list of ATs included on yearly plans. Topic work was more organised throughout the years. They had devised a "rolling programme of themes" which allowed them to cover the NC. There were six themes per year and thus 12 themes over two years. Over the next two

years, the themes would be revisited in greater depth. Over four years the NC “would be covered with options for other topics as well.”

During their staff meetings, the head teacher and the teachers were developing a Staff Development Plan which would include teacher appraisal. He felt the document would include setting goals for staff development and direct INSET requirements for teachers. The Staff Plan would, the head said, “keep the school under scrutiny” and would help teachers “spell out their own needs”. There would be regular moderation meetings to develop Teacher Assessment skills. This had already begun in Maths. A School Development plan was also being written that year. The PLR (Primary Language Record) was still being used, although the school had been implementing the use of several National Curriculum Reporting Materials, especially in Year 2 because of the SATs.

Assessment Co-ordinator Information

The Year Two teacher was the assessment co-ordinator for the school. While she agreed in principle with the steps the head teacher was taking to implement the National Curriculum and develop more effective planning and assessment skills in the school, she said she was opposed to many of the methods the head teacher used to motivate the teachers. An interview and observation session in her class provided information on the assessment values and practices she promoted in her role of assessment co-ordinator.

Mrs McGinty used published schemes of work in her teacher. She felt this was useful for covering basic skills. She was unhappy with the weekly plan, and reported this was just “for the head, the daily plan is for me.” Her term plans listed the topics and the ATs she was trying to cover. (See Appendix B.2) Her tasks were closely matched with the curriculum so that she would be able to grasp whether or not they are at grade level or not. (See Appendix B.3) She used tick lists to note whether children had covered a Statement of Attainment and another mark if she felt they had demonstrated achievement of it. (See Appendix

B.4) Her planning was very directed to the SATs. She appreciated the structure and organisation of the curriculum and felt it was necessary to improve teaching. When asked about Teacher Assessment skills she said, "We need better checklists on assessment--TA is very poor generally." She reported that the NC should be helpful in making teachers more professional. In looking through her feedback to the children on their written work, there were more examples of her writing the AT demonstrated by a piece of work than in the Year One classroom.

In summary, although the Year Two teacher was more systematic in her implementation of the NC assessment requirements because of the SAT testing, her daily teaching methods were very similar to the Year One teacher. Both teachers depended on published schemes of work and relied upon these as the most important source of assessment data. Both teachers focussed on summative assessment. Teacher Assessment appeared to be used primarily for record-keeping and determining of NC levels of achievement. Both teachers communicated that assessment was something apart from teaching itself. It is important to note that the policy of assessment at the school would be drafted by the Year Two teacher and the head teacher. The staff would help edit and amend the document after it was written.

School Context

Table 1
Part A- Assessment Practices

Results from Questionnaires (N=7)

Rate each one on a scale of 1 to 5 to show the importance you attach to the activity.

Assessment Practices	Most Imp 1	2	3	4	Least Imp 5
Close Observation of a child working	6* (85.7%)	1 (14.3)	0	0	0
Questioning during a task to see if a child understands	6* (85.7)	0	1 (14.3)	0	0
Questioning at the end of a task to evaluate the success of the lesson	3* (42.9)	4 (57.1)	2 (28.6)	0	0
Questioning at the end of a lesson to reinforce the main concepts	2 (28.6)	3 (42.9)	2* (28.6)	0	0
Giving verbal feedback to a child about the quality of his/her work	5* (71.4)	2 (28.6)	0	0	0
Giving written feedback marked on the work	1 (14.3)	2 (28.6)	2* (28.6)	2 (28.6)	0
Deciding on levels and recording information about a child's work	1 (14.3)	1 (14.3)	5* (71.4)	1	2
Using SAT-type tasks or other standardised tests to support your on-going assessment	1 (14.3)	0	6* (85.7)	0	0

(N=6. The Year Five teacher said he never uses this material.)

* Asterisk denotes Year One teacher's responses.

Discussion

Close observation of a child a work, questioning during a task and giving verbal feedback to a child about the quality of the work were rated the most important assessment activities. There was more emphasis on written

feedback at this school than in the other case study schools. The use of SAT-type assessment activities was rated more important than in other schools. The Year Two teacher rated this as a most important assessment activity. However, the reception and the Year One teacher both rated SAT-activities as a 3 or a somewhat important activity. The fact that they use SAT materials at all in their classrooms is different than the other case study schools. The Year Three teacher's comment added information to this finding. He rated SAT materials as a 3 but wrote below, "Not at present done--but would be useful, e.g. norm-referenced or criterion-referenced tests." This suggests that the teachers have an understanding of the utility of such materials though they do not yet use them in their practice.

Table 2 Results of Part B-Planning Source Materials. (N=7)

This question attempts to find the sources of the teacher's ideas for planning lessons. Teachers were asked to "Circle the most appropriate number where 1 is very useful and 5 is of little use to your planning."

Sources of Planning	Very Useful			Not Useful	
	1	2	3	4	5
Published work schemes and teacher handbooks	3 (42.9%)	0	3 (42.9)	1 (14.3)	0
Your own records and ideas from observing the child	3 (42.9)	2 (28.6)	2 (28.6)	0	0
National Curriculum Statements of Attainment	2 (28.6)	2 (28.6)	2 (28.6)	0	1 (14.9)
National Curriculum Support Material such as SEAC's Pupil's Work Assessed	0	0	4 (57.1)	0	3 (42.9)
LEA or school-produced plans	2 (28.6)	2 (28.6)	2 (28.6)	0	1 (14.9)

Discussion

Six out of seven teachers in this school used published work schemes for planning. They rated these materials as either very useful or moderately useful. Only the Year Four teacher did not use them for planning. This overall school result supports what was observed in the year one and two classrooms. The Year One teacher used published schemes to help organise and ensure coverage of the basic curriculum material so that there is more time to add on the extra work required by the National Curriculum. The Year Three teacher made these comments about planning on his questionnaire, "the inclusion of science as statutory subject--must now be covered--this has to be included in planning. Now, the curriculum is overloaded so pressure is on teachers and consequently

students- to complete all curriculum areas in one week. Not possible to teach in depth as children might require.”

The National Curriculum Attainment targets were used to some extent by everyone but the year four teacher. LEA or school-produced plans were also used by everyone except the year two teacher who was using the National Curriculum Attainment Targets-Class Record Sheet (key stage one). This helped her to check whether all the material required for the SATs was taught and assessed. The Year Two teacher said the head teacher had ordered the booklet for her.

The teachers rated information about the children’s learning obtained by observation as very important. All the teachers rated this as moderately important to very important. This finding may suggest that the teachers in this school feel they are responsive to the changing needs of the students. Whether this was evident in practice could only be established through observation in the classroom. In the case of the Year One teacher, her rating of 3 or moderately useful was not supported by the data collected through documents and observation in her classroom.

Table 3 Results from Questionnaire Part C- Influences on Teacher’s

Assessment Practices

Sources of Influence ranked 1-6 where 1 is the most important influence on teacher assessment methods and 6 is the least important.

Ranking by Teachers in the School						
Sources of Influence	1	2	3	4	5	6
Teacher Training	2 29%	1 14%	1 14%	0 0%	0 0%	3 43%
Experience In The Classroom	5 71%	2 29%	0 0 %	0 0%	0 0 %	0 0%
National Curriculum Requirements	0 0%	2 29%	3 43%	1 14%	0 0%	1 14%
National Curriculum Support Materials on Teacher Assessment	0 0%	0 0%	3 43%	0 0%	2 29%	2 29%
In-Service Training	0 0%	0 0%	4 57%	1 14%	0 0%	2 29%
Ideas ,Resources & Methods Learned From Colleagues at This School or Other Schools	3 43%	4 57%	0 0 %	0 0%	0 0%	0 0%

Discussion

Experience in the classroom and ideas from colleagues were both ranked highly as sources of influence. The National Curriculum and INSET were ranked as more moderate influences on assessment skills. Few teachers looked to the NC support documents for guidance. Teacher training was also ranked as a moderate influence on assessment skills. In service training has not been rated as very influential. If this finding is supported by the results of the other case studies, it would be important to determine why pre-service training has not included effective teaching of formative assessment skills.

Part E

Part E of the questionnaire asked teachers to consider their use of the National Curriculum Statements of Attainment for Planning, Teaching and Assessment. These results give more information about the amount of National curriculum use in the planning, teaching and assessing aspects of teacher work. The data results also reveal information relevant to the context of the year one teacher’s assessment practice. The results of the sections of the questionnaire most related to the research questions of this study are tabulated in chart form on the following pages.

Table 4 E. 1. a) Use of Statements of Attainment (N=7)

“I use Statements of Attainment to plan my daily lessons.”

	Mathematics	English	Science
A Lot	6*	3*	4
A Little	0	3	2*
Never	1	1	1

*The asterisk denotes the Year One teacher’s response.

Discussion

The school reported a high level of use of Statements of Attainment for daily planning. This was a higher level of use than any other school in the study. One possible explanation of these results was the headmaster’s requirement that weekly plans be submitted to him for examination. Although ATs were not required on these plans, teachers may have found it helpful to use the curriculum to support their planning decisions.

Table 5 E. 1. b) Use of Statements of Attainment (N=7)

“I use Statements of Attainment to decide on a child’s achievement.”

	Mathematics	English	Science
A Lot	4*	5*	4*
A Little	3	2	3
Never	0	0	0

*The asterisk denotes the Year One teacher’s response.

Discussion

More teachers in this school reported that they used the National Curriculum Attainment targets for the summative assessment purpose of deciding on a student’s level of achievement than in any of the other case study settings. These results suggest that teachers may to referred to the curriculum to develop their understanding of the National Curriculum standards of achievement.

Table 6 E. 1. c) Use of Statements of Attainment (N=6)

“I use Statements of Attainment to help diagnose a child’s strengths and weaknesses.”

	Mathematics	English	Science
A Lot	0	0	0
A Little	5*	5*	4*
Never	1	1	2

*The asterisk denotes the Year One teacher’s response.

Discussion

The responses in this section showed a moderate level of use of Statements of Attainment for the formative purpose of diagnosing strengths and

weaknesses. Most teachers reported their use as only a little or never. No teachers used the curriculum “a lot” for this purpose.

Table 7 E. 3. a) The Influence of the National Curriculum on Teaching (N=7)

“My teaching methods and class organisation methods have been influenced by the National Curriculum.”

	Mathematics	English	Science
A Lot	4*	2*	5*
A Little	2	3	2
Never	1	2	0

*The asterisk denotes the Year One teacher’s response.

Discussion

The responses for this item indicated that the teachers felt their teaching had been influenced by the requirements of the National Curriculum. Science had been influenced the most, possibly by its very inclusion in the curriculum as a core subject beginning in year one. This subject area may have been new or unfamiliar to them.

Table 8 E. 3. b) The Influence of the National Curriculum on Teaching (N=7)

“My recording keeping methods have been influenced by the National Curriculum.”

	Mathematics	English	Science
A Lot	3	3	3
A Little	4*	4*	4*
Never	0	0	0

*The asterisk denotes the Year One teacher’s response.

From these results, it appeared that record-keeping in this school had been significantly influenced by the requirements of the National Curriculum. One teacher commented on the last two items on the questionnaire, "one has to fulfill the legal requirements of the National Curriculum and therefore in every way one is influenced by this."

Teacher Background and Classroom Context

The Year One teacher, Jennifer Stephenson, was in her late twenties and had five years of primary teaching experience. Originally from Ireland, she had taught abroad before taking this position at St Michael's. There were 33 children in her class, 29 present on the first data collection day. The teacher had a number of children with exceptional learning problems. One particular child had very limited expressive language skills and was assigned to Miss Stephenson's class for half-days. The year one teacher had very little academic support in the form of a primary helper, although she did have a student volunteer helping with reading practice two afternoons a week. The teacher communicated to the researcher very clearly that the school must operate on very strict lines to maintain enough stability and correct behaviour from the pupils to accomplish any teaching at all. She complained of constant interruptions to her teaching which occurred without her consent or knowledge. The field notes from the first data collection notes reinforce this impression.

Day One-

... When the educational psychologist came in to the class to assess the student with poor language skills, the teacher voiced her frustration that the pupil had received no academic help from the psychologist. The teacher said she herself was required to develop a programme for basic language without any guidance or materials. The teacher appeared to have a poor rapport with the head teacher. She said that she and the other teachers were not consulted or

informed about issues that affected their work. Some confirmation of her comment was evident on the first day of the data collection period. Miss Stephenson had been asked briefly about participating in this research project six weeks before, but had not been advised of any details or information as to when it would begin. She did not realize I was starting that day. (This occurred despite several weeks of on-going correspondence between the researcher and the head teacher.) During the first morning of data collection, a volunteer came in to put up the children's Christmas wreaths with a loud staple gun, the school psychologist was testing one child, and the Italian teacher was singing with the children while using a microphone. At one point before recess, the head teacher arrived with a school inspector on an unannounced visit. The teacher, who had been listening to her lowest reading group work on a book, went to be introduced to the visitor and in turn, introduced all the other adults in the room (five plus the head and the inspector). At playtime, the teacher expressed the opinion that "this is how it always is." (St. Michael's Nov. 23)

In the second week, the teacher admitted she wanted to change schools because of the "atmosphere". What was meant by "this atmosphere" became clearer over the course of data collection. On the second day of data collection, one child, who had been caught stealing and had been sent home on suspension, arrived back in class without explanation from the office. The teacher felt she had little support for discipline from the head. More detail of this relationship was gathered during playtime breaks in the staff room and is described more fully in the school context section.

Daily Routine

The teacher said she wished to keep a very stable routine in her classroom to help offset the unsettling effects of so many disruptions. The day

always began in the same way with attendance taken on the register, a story, a phonics lesson (this included materials from the Letterland phonic programme) and announcements on the carpet. The children had eight different folders or workbooks for their lessons. Some of these included SPMG math workbooks, journal books, My First Word booklets, and The New Nelson Handwriting Letters and Numerals booklets. There was little evidence of any teacher-made materials in the classroom. The art table was always set up and children rotated into the art centre or else worked in small groups at a table on their booklets. The teacher had to give very few instructions for the seat work. The children knew to start right away with their journals which involved copying a sentence from the Journal board and adding a line of their own with a picture. They then were to complete two pages of math, and finish a page on the correct formation of a letter as drawn on the board. This routine was helpful to the teacher because it gave her time to attend to particular children or to deal with problems in the class. The design of the classroom (see Appendix B.5) included the hallway between three classrooms. This meant that anyone going to the Year Two room had to walk through the Reception and Year One classrooms. The teachers found this distracting to some children.

Teacher Views on Curriculum and Assessment Issues--Questionnaire and Interview Responses

Before describing teacher practice based on the observations made in the classroom, the questionnaire and interview data are reported. This is done to explain what the teacher believed to be her practice and the influences which have shaped her thinking and work. Observational data will be used to confirm or question her self-report. The teacher rated close observation of children working in class, giving verbal feedback and questioning, as her most important assessment activities. In interview she noted most of her instructions to children at the beginning of a task relate to organisation of the task and materials, with a

few introductory questions to get them thinking. She used whole class teaching at the carpet for most of these introductions. She also said she liked to show an example of what they are trying to make or do and "tell them what is required." She noted that she repeats instructions again when they start working and indicated that she gives feedback about how they are working.

On her questionnaire responses (See Table 1), the teacher rated very highly, (1) close observation of a child working in class, questioning during a task to see if a child understands a skill, task or concept, questioning at the end of a task to evaluate her teaching and giving verbal feedback. The eight practices listed in part A of the questionnaire include both formative and summative assessment practices. The first five relate to formative strategies and the last four relate to summative practice. Giving verbal feedback may be used as summative assessment depending on the timing and the purpose of the feedback. The raw scores were inversely scaled so that a high score indicates a high level of use of the identified practices. This Year One teacher scored 32/40 possible points overall, suggesting a high level of use of assessment strategies. More important is the breakdown of her ratings; in the first five practices relating to formative assessment, she scored 23/25. For the last four or summative practices, she scored 14 out of 20, suggesting a lower level of use of summative strategies. It is this teacher's self-reported understanding therefore, that her formative strategies are very important to her teaching practices. In terms of research methodology for this case study in particular, the use of several research instruments designed to gather data on the same question is crucial to verifying conclusions.

In Part B of the questionnaire, the teacher ranked all sources for planning given as a (3) or, moderately useful, including the National Curriculum, published work schemes, her own records and ideas from observation. Only school-produced plans were ranked more useful (2).

In Part C of her questionnaire, Miss Stephenson noted that her assessment practices were most influenced by her experience in the classroom

and her teacher training, although she said she did not have a course in assessment in her pre-service teacher training. The influence of colleagues was also rated very highly (1). The National Curriculum, Support Materials and INSET are all rated somewhat lower at 3.

In Part D, Miss Stephenson indicated that the primary purpose of assessment is to diagnose an individual student's progress and future needs. In Part E, she reported that she uses the National Curriculum Statements of Attainment "a lot" for planning. A possible reason for this may be that the head teacher had designed a weekly planning sheet based on the National Curriculum and required each teacher to submit his or her weekly plans. On these weekly planning sheets were listed learning outcomes, (though ATs did not have to be included here), activities, organisation and resources, and evaluation strategies. The Year One teacher also said she used the National Curriculum Statements "a lot" to decide on a child's achievement but only a little for diagnosing a child's strengths and weaknesses. This suggests she uses it more for summative purposes than formative ones, in contrast to her ratings in the first section of the questionnaire. She said that she has used the examples given in the curriculum to help her with planning, especially since some of the material was new to her. She also wrote that her teaching methods and classroom organisation have been influenced "a lot" by the National Curriculum, while her record-keeping practices have only changed a little. This finding is opposite to what was noted in the other four schools; record-keeping and summative recording of achievement were influenced first and teaching methods changed later and to a lesser degree. In interview, the teacher said she kept samples of work and uses the Modbury tracking booklet, although it had "gone missing" recently.

Formative Assessment Practice

The Teacher in Action

Planning

1. Instruction is based upon use of the curriculum outcomes or requirements.

The teacher used a variety of published work schemes in separate subject areas in order to simplify her planning and ensure coverage of basic skills. She said that these were picked because they covered the National Curriculum requirements. With a very large class, and frequent interruptions, she found workbooks the best way to track pupil progress and keep the work continuing at a steady pace. She could send these workbooks home for extra work if her time in class was cut short. She used these workbooks as samples of work as well. Her long term planning therefore consisted mainly in reading the curriculum for the skills and knowledge requirements, selecting the available work schemes to cover these skills and creating simple routines that children could repeat daily to cover other content and skills. For journal, as mentioned, the children copied the date, a short sentence about the weather or season, wrote their own sentence about their day and drew a picture. The teacher's sentence often included rhyming words or sound patterns drawn from the phonics programme. The teacher had the curriculum documents at her desk and referred to them during the data collection period. She used the examples in the curriculum as ready-made activities when she was unsure about the way to teach the statement of attainment. She had had little training in science and only two days of in-service on the curriculum itself. She therefore said she had to read the curriculum to find out what was required.

For weekly planning, the teacher took the lead from the work schemes once again. In Maths, she would check the work coming up in the next few pages of the booklet and plan a manipulative activity to precede the pencil and paper task. In phonics she would include a story or song emphasising the same sound

introduced that day. The teacher planned three stories to read per day. She and other teachers mentioned that the children do not often have stories read to them at night, although books are sent home twice a week. She selected books for their congruence with her topic work. During the data collection period, the teacher did not attempt integrated planning where math, science and language were all required in the same task. Topic webbing or integrated planning were not curriculum planning strategies evident in any of her plans for the term. As previously mentioned, the head teacher required weekly planning sheets to be submitted to him. (See Appendix B.6) The teacher frequently filled out these sheets at the end of the week instead of at the beginning. The evidence suggests that the teacher depended more on published work schemes than her questionnaire indicated (she rated them as moderately important in her planning). She was dependent on the NC curriculum for help in areas where she was inexperienced, especially science.

2. Information of current student achievement and conceptual understanding is used to feed forward into planning.

English - Reading Skills

There was little anecdotal or written evidence that Miss Stephenson adapted her lesson plans for subsequent lessons based on information gathered from questioning, observing or discussion in the class. In reading however, the teacher kept notes on each child's progress and used summaries of the stages and components of reading skills photocopied at the top of each child's anecdotal record. Her notes indicated what the child was able to read and the strategies used. (See Appendix B.7) At times she noted, "reading the pictures only" or "no 1:1 correspondence". There were no other forms of reading analysis used such as a Miscue Analysis or Reading Inventory Scale to support and develop her analysis of a child's reading skills. The photocopied rubric of the stages of reading material was supplied by the head teacher and was selected

from Children's Work Assessed, a NC curriculum support document. The document was shown to the teachers in a staff assessment moderation meeting. In interview she said that she used her anecdotal notes as a record but also as a guide to selecting the next book for the child. She used the Ginn Reading Series which provided a progression of reading texts. In this way, the teacher used these notes to feed forward into planning, and to keep track of a child's current skills according to standard NC requirements.

Maths

The teacher did not keep anecdotal notes to help her plan in maths. Instead, she corrected work daily and used the workbooks as samples of work. She said that her groups were generally selected on "the ability of the children to work independently or not." She usually sat with the group that required the most monitoring. The other children came and queued at this desk to have their work checked. At the end of one session at recess, she was asked by the researcher who was ready for the next skill and who needed more practice. She was able to answer quickly for 10 children, but these were the children who needed more work. The others she said were all doing adequately. She relied on memory for this judgement rather than notes, but could speak more specifically when she glanced through their workbooks. From these observations, the teacher exhibits many of the attitudes and practices associated with the "critical intuitive" model of teacher assessment (McCallum et al. 1993). The teacher minimally-adopted the national curriculum procedures and did not appear to integrate assessment into her practice in any systematic way. She appeared to be a "tried and tested practitioner" in that she appeared very confident that she was covering the curriculum and assessing the children's work in an ongoing way. However, there was little evidence that she planned assessment into her teaching or that she conducted particular tasks design to reveal achievement or thinking. She was also very unclear about her reasons for judgements made both in her planning notes and in her interviews.

Science

The art centre was changed into the science centre twice a week. The teacher set up experiments and stayed at the centre during most of the session with each group. She made sure the others were working on activities they could manage independently at these times. The teacher had a very clear plan concerning what had to be learned through the activity. She referred to a planning sheet which listed the elements of the activities, including the questions she was going to ask. She did not write down any notes from these sessions. However, she did look at the children's notes at the end of the lesson. She seemed very focussed on the spelling of the words on the pupils' work rather than the content as evidence of conceptual understanding. She did not have any child do the experiment again to check their thinking. She was intent on everyone getting a chance to "have a go" at it. She selected four students to work at the science table at a time. The teacher stayed and asked her questions of the children and demonstrated the task several times. Some of the questions Miss Stephenson asked were drawn from the NC curriculum examples, she reported. She asked generally the same questions each time, indicating she did not change her teaching as a result of her reflections of the progress of previous groups or the particular needs of the group she was working with. (An excerpt of a lesson in science is given in the teaching phase.)

Teaching

1.Information of current student achievement and conceptual understanding used to feed forward into planning and teaching- Includes discourse and use of tasks

English

The teacher did a great deal of in-class marking of workbooks with the student beside her, which she said informed her as to who was "getting on well" and who was not. She had tables grouped by ability. Several times during the

data collection period, she moved children from table to table. This may have been in response to her assessment of their work. She said the criterion for the different tables was the level of independence the child showed. However, everyone at a table was working on very similar language or math questions at the same time.

In her phonics work at the carpet each morning, the teacher would go through a list of sounds they had covered and ask for words starting with that sound. She asked several people to give her a word with that initial sound. She kept a list of sounds that no one seemed to know well. The teacher modeled the sound but did not re-teach the sound later in the day. She often reviewed it the next day. Sounds the children seemed to know well, she dropped from the list. The verbal interactions were often conducted using the Initiation (by the teacher), Response (by the student), and Feedback/ Evaluation (by the teacher) form. (IRF: Sinclair and Coulthard 1975) She appeared to be seeking a specific answer from the child in response to her questions. For phonics, the question often simply required the children to think of examples of words starting with the identified sound, although if they were stuck she would give them clues. This tactic is also part of the IRF pattern, "If the reply called for by the initiation act appears in the very next turn of talk, the result is a three part teacher-student sequence. If the reply called for by the initiation act does not immediately appear, the initiator 'works' (prompts, repeats elicitations, simplifies initiations) until this symmetry is established." (Mehan, 1979: 62) An excerpt from the morning phonics sessions shows this process. Important to the goal of extending student-teacher discourse, thereby enabling the students to explain, or develop their thinking aloud, is the use of questions which require more than simply a correct or incorrect response and the avoidance the third part of the sequence, the "evaluate" or feedback remark, which serves only to close the exchange rather than extend it. (Torrance and Pryor: 1998)

The excerpt comes from an early morning phonics session. The

children have come in and listened to the morning notices and a story. They have been sitting for about 10 minutes. The teacher has positioned three children near her for behavioural reasons. With 27 children on the carpet, some of them whispering or answering at the same time, the audio- recording was not always perfectly clear. For this reason some of the comments were obscured. This is marked with an *. However, it is worth noting that the class was not very noisy or restless, despite the fact that they had been sitting and listening for 10 minutes.

T- We're going to practise your sounds now--to help you read. This one's B - from Letterland - say the sound b. Beee (She does not have the picture cards with her that day as she has in the past. She makes the sound and the children repeat it.*

T- B - for?-(She looks round the group looking for examples of b words, and she asks 2 children. Only a few have their hands up) for? it's

T- Bee for bear and bunny?

C- Bigger (louder) bigger?

T- (teacher does not indicate whether this is right but nods at another child.)

C-bad (the teacher rolls her eyes, some children think this is funny, but others are not sure whether the teacher is amused or not by the example.)

T- Right then S is for Sammy Snake. S for...

C - Snake

T - Shines in the sky?

C - Sun

T - Yes H for? (She pulls her own hair. No one answers.) Hairy Hat Man!

Use of we- a move towards collegiality- although the position of the teacher at the front and above the pupils on a chair reasserts her position of power. Gave a reason for studying the letter sounds and reminds them of the phonic programme they have been studying

Models the sounds and gives examples. With almost 30 children on the carpet many cannot hear or see her very well. Several have their heads in their hands and are not listening)

Doesn't acknowledge the answer as correct, however, the children seem to understand that if she moves on the next person or question, then the answer was correct. The incident suggests the implicit rules governing the instruction in the class context.

Children look up at the word bad which seems emotionally-charged somehow. The teacher's ambiguous eye rolling is disconcerting to some children who get more restless but are quiet. They seem to be wanting to get a clue from the teacher whether the example is funny or not. They do not want to appear to be amused unless this is sanctioned by the teacher.

This small incident suggests the teacher occupies a position of considerable and acknowledged power in the classroom context.

Gives a prompt- quite and obvious one- to direct the children to the answer she wants. Despite this prompt, no one answers. Was this because they did not know the answer, or that they knew if they waited she would tell them the answer?

This example shows the kind of questions often used in this class. The teacher asked many closed questions, often looking for one correct answer. The children may not respond when they are not sure of the answer she wants. This might account for the few number of hands up when questions are asked. The pattern clearly falls into the IRF sequence of teacher-student discourse. (Sinclair

and Coulthard, 1975) The sequence here was extended in the teacher's use of a clue to help the student's give the answer she was looking for. The sequence is repeated and the pattern well-understood by the students. The teacher knows the answer and is looking for answers that conform to her notion of what is correct. Furthermore, from this exchange the teacher only has information about the understanding of the few children who have answered. She does not have any information about what the others understand.

Science

The teacher said she selected the float-sink experiment because it was used as an example in several curriculum materials. It was also used as an early SAT task. As Miss Stephenson reported, she has little background in science and indicated that she selected ideas from the curriculum for planning in this area. In this excerpt from her work with four children, the teacher used questioning and observation to find out what the children knew about density. She had a piece of paper with the questions to ask written out.

T - Right- okay. Everybody get a piece of paper. (She hands out a piece to each child.

C - Thank you, Miss.

T - What a sensible boy... (one boy grabs a ball to put in the water) You shouldn't have to go anywhere-G- we've got a rubber ball. What we're going to do is have lots of different objects. We're going to test them whether they float or ...?

C - Sink

T - Yes sink. Before we do that we need to examine them. Say for instance- (someone is picking up the objects) Right that'll do.

C - (pointing to the ball) I think that'll float.

T - Why? (to another boy from a different group) Daniel go away.

Framing move- a verbal line is draw to emphasise that the lesson is about to begin.

Child has understood the values of this class- polite behaviour is highly valued Again reiteration of the behavioural values Teacher directs children by putting her hands down by her sides as if modeling stance. She also waves G back one pace to prevent him from touching the water table.

Outlines the process of the experiment. Use the word test to imply that the children see this as "science" rather than play.

Teacher puts emphasis on the word examine. Questioning is closed, only one answer is possible. The teacher looks at G for a response. The question seems to be aimed not just at finding out the answer but to check if G is on task and has been listening. Whatever the teacher's intention, the children seem willing to comply in order to get a chance to put things in the water. They are looking at the water and the objects,

Child says this to another child but the teacher hears it and picks up the idea.

Teacher extends the dialogue very simply with the why question and breaks the IRF sequence. The question is aimed at an explanation of the concept. Here another student responds to the question instead of the reply made by the teacher. The teacher's attention is then draw away by another student in the class.

C - It's plastic.

T - What about the shape of it?

C - I'll go and try it.

(He puts it in the water.

The teacher is watching Daniel return to his work.

Then she looks back.)

T - Right, it is floating. It is light and it does float. A little boat made of plastic floats (she tries it.)

C - (Jack chooses another thing and the teacher puts it back)

T - Let's, let's examine the ball first- does it have any holes in it?

(She shows it around. The pupils do not touch it.)

C - No, no

T - What is in it?

C - (waits) air.

T - Does it float?

C - Yes (Only one child answers, the rest want to get going and put other things in the water.)

T - Now we have two objects that float. Both these things are made from?

C - Rubber ball

C - plastic, it's plastic

T - You try now (one picks up a cork) Right okay, right. Is it light?

C - (Throws it in- does not wait to examine it) It floats.

T - Do you want to compare these two (the ball and the cork) Are they the same weight? Made of the same things? (No one

Child hits on the concept of materials but the teacher tells about shape, referring them to considerations of shape rather than materials.

Use of "Right" implies some sort of verbal summation. She refers to weight and says the plastic is light. She does not use the student's idea about materials or question to extend her understanding of the child's understanding about materials.

Again the teacher seems to tell them the answer rather than questioning them and leading them to concepts.

The children look a little dispirited; it seems this is going to be a teacher demonstration type lesson somehow. There is also a feeling of rushing about the task but this may not be perceived by the children.

Impression that this is a demonstration lesson is reinforced.

Again the teacher does not let the children remark on the salient features of the ball. She directs them to the answer she expects. Even though she asks them to examine the ball, this is not an open question and does not elicit discussion. Teacher attempts to direct the answer but does not succeed. Rubber and plastic are both mentioned. Teacher seems to ignore this and moves on. Child seems pleased with his answer. The question is really a factual recall question because it has been asked earlier about the plastic boat.

answers

They are all playing with objects in the water and trying to push them down and make them sink. She tries another ball.) Does it float?

C - (the same boy as before) Yes it's plastic and it floats.

T - How about this? (an open plastic bottle) What's it made of?

C - Plastic

T - Is it bigger or smaller? (She holds up the plastic boat.)

C - Bigger (They did not really look up much.)

T - What's this at the end? (She gives it to one child.)

C - A hole.

T - What might happen?

C - It will float. (They try it and it floats.)

T - What's it got inside?

C - Air

T - (She fills it with water.)

C - It's sinking.

T - Why?

C - Cause it's heavier now.

T - No air in it. Let's try something else.

Draws in another child with this question. Again reinforces the concept of weight. The child wants to test first. The teacher lets this happen. This may be an example of the teacher adapting her lesson as a result of observing the way the child needs to work. However, she continues to control the lesson through her questioning even when she uses words such as compare which might open up the discussion.

Introduces size concept. Again the children want to try the objects out and the teacher controls the process through questions such as what is inside. Again emphasis is made through intonation on key words such as compare, air, light, examine and test to make the task more serious and scientific.

In this way the teacher went through every item and question on her list. In the end, she divided their note papers into two by folding them. She wrote Float/Sink on the black board. She told them to make of list of what they had found out. She left them while they did this. The children only discussed the spelling of the words such as cork, boat, wood and did not discuss the concepts at all. She failed to observe this note-making and as a result, missed information about whether they had understood the lesson or not. The teacher used the same list of questions as a guide for all the groups. Some groups had five children in them. She gave the mini-lesson six times: four times one day and two times another day. In interview, she said she would go over the concepts of density and flotation in a whole class lesson, but this did not occur while the researcher was in the room.

Maths

The teacher's questioning technique in maths was sometimes directed to keeping children on task. At times questions were directed towards processes used to get the answer to the question. The following are samples of her discourse with children at their tables while they were working on maths.

T - What does the question say? Read it to me.

C - You need the numbers up to 10.

T - They're written on the wall. (She waits while they work.) What's the answer? (No one answers.) Did you count?

C - 6

T - Yes. What's the next one? Keep them all in front of you (the unifix counters). Read the sum out to me. What does it say?

C - (the children say together) $1+2+3=$ (They start to make cubes fit the question. The teacher starts to work with one girl who doesn't know what to do. The rest complete the questions alone.)

Here she directed them to the process. The teacher said she reviews the instructions with the small group and then gives individual help when it is needed. On several occasions the teacher sat at a group table and watched the children work. She did not ask them questions and waited until they had finished before she corrected them. She did not make any anecdotal notes from these brief observation periods and her attention was often drawn away by noise in other parts of the room. It was not clear how she made use of this information.

2. Teaching -Self-evaluation and planning adaptation

In the Science lesson on floating and sinking the teacher did not appear to use what she had found from one group and use it to improve her presentation or discussion in the following groups. The questions she asked did not change substantially, though she sometimes changed the order and the phrasing. She did not actually read from her list but referred to it. In one group, she had everyone watch the whole experiment and then everyone had a chance to do it. She felt they could not listen and play at the same time. She was pushed for time because of the many practices for the Christmas pageant and the frequent assemblies and interruptions. She tried to make sure that everyone had at least the experience and had the opportunity to discuss the basic questions about the concepts at the water table. She did not however, just leave them to discover the concepts themselves. While the notes were often done without her, she did make sure she asked questions about size, shape, air and weight of each group. As a result, though she used a task and a set of questions that could have been used more formatively to assess each child's understanding, or to improve her own teaching effectiveness, she did not appear to do so. She had to monitor the rest of the class at the same time as the science lesson. In the event the amount of time allotted to the task was limited to about 10-15 minutes per group.

3. Teaching -Formative assessment strategies including use of questioning techniques, expert or student exemplars, modeling and guided practice.

English

The teacher used guided practice, modeling and questioning in some activities. In phonics for example, she would repeat the sound and give several examples of the sound in a word. The teacher made clear the process to solve problems through guided practice rather than telling the child the answer. When correcting spelling lists, she would add more words that followed the same rhyming pattern and point out the similarity. This also informed the teacher that the child was noticing and understanding the pattern.

T - (corrected several spelling words) Give me some more words which end like net--bet, set, let....

C - met?

T - Yes that's it.

During the data collection period, this kind of teaching strategy re-occurred. It was determined that such examples might constituted a specific kind of feedback where the process or methods needed to solve a problem were identified. The child was essentially led through the process until the answer became clear. Miss Stephenson did not go over the process or summarise it for the student after the talk. This may have helped the student generalise the process and thus be able to transfer the thinking to other similar situations. Whether this should be categorized as feedback or as a teaching strategy simply called guided practice is still unclear and should be monitored in the next case study.

Assessing

1. Use of Feedback

Many of the extracts from the transcripts provide examples where feedback is not clearly separated from teaching and the discourse of teaching. However, for the purposes of describing the range and type of feedback given by the year one teacher while she taught and assessed her pupils, the categories described by the typology developed by Gipps & Tunstall (1995) are illuminative. The typology identifies four types of feedback placed along a continuum. Feedback categories include rewarding/ punishing, approving and disapproving feedback, feedback which specifies improvement and achievement, and finally feedback which acknowledges achievement and constructs the way forward. Gipps and Tunstall also suggest that group feedback can be used as a powerful learning tool. In the following examples, whole class and individual feedback samples were grouped together and sorted using the categories suggested in the feedback typology.

Type A- Rewarding and Punishing

Other than offering choice of activity, and the chance to help the teacher if they were quiet and sitting up straight, the teacher did not reward the children. There was a board where excellent work was posted. The teacher often gave negative feedback that could be considered Type A- punishment or Type B- negative disapproving remarks. In one instance, she sent one boy to the office to talk to the head teacher. She also made specific comments which appeared to imply punishment. For example;

T - You are not doing your work- Kate is on her phonics and you're still on your writing. I'll have to call Daddy.

These comments were punishing in that the voice was loud so that everyone heard the reprimand, the child was compared to another and that the teacher was threatening to call home and to incur more punishment there. Other negative comments said in front of others included:

T - R_____ I might have to put you on your own.

T - Don't attempt to look at hers, Don't put your nose in other people's business. I bet your Mommy tells you that.

T - _____ Don't disturb the others. I'm going to be angry.

The teacher also set up a place referred to as the "naughty tables" where people were sent if they could not finish their work without talking too much.

Type B - Approving and Disapproving

The teacher smiled a great deal, especially during story time. She made many general comments that work was "lovely", or that the weather or the Christmas songs or the decorations were lovely. Comments included:

T - That's the girl!

T - S-He's a sensible boy!

The children generally responded well to this warmth. She used please and thank you routinely to the children even when they helped do small jobs like returning pencils to the boxes.

The teacher was nevertheless very specific concerning appropriate behaviour and language. She used a shouting voice at times. The teacher at times

also called specific actions “naughty” and “not sensible”. Sensible seemed to be the quality most desired by this teacher. For example, after hearing from another teacher that two girls had been teasing another child at playtime, the teacher was very cross with the two girls during time on the carpet after lunch. At one point she referred to one girl as “a bit of a madam” and “not nearly as nice as your older sister.”

Type C - Use of Criteria for Work

In Maths the teacher gave repeated comments on the criteria necessary for success, generally relating to work habits. “Slow and careful” were words she repeated often to individuals in response to noticing careless errors in their books. These were general comments.

Type C - Correction

There were many examples of correction of errors. In all subjects the children completed work and then lined up to have it checked.

T - This isn't it. (a number sequence was incorrect) What's wrong?

C - I don't know

T - Look at the wall (The teacher pointed to the number line charts on the wall, labeled one to twenty)

C - Oh (The teacher took the next child's book. The first child returned to her desk and asked a friend for help)

Here the teacher gave her a method of finding out the answer but did not explain enough to the child for her to complete the correction on her own. The child asked another child for help instead of asking for further explanation from the teacher. In written feedback the teacher corrected errors and at times modeled the method to get the correct answer. She drew in, for example, the arrows connecting two circles. The first circle contained three numbers and the second circle was for the each of the numbers plus 2. The student had left it blank because she could not figure out what to do. The teacher drew in the lines and wrote +2 above each to indicate the process. (See Appendix B.8) In English or

language activities, the teacher made correction comments on spelling and neatness regularly. She corrected at a desk and checked and totaled up the errors as she talked. Some samples of her comments are included here:

T - Now--two wrong. (When correcting their spelling she put circles around the misspelled words.)

T - That's not very good is it. Very sloppy. Do it again.

Type C -Improvement Feedback

For his new word book, a child asked the teacher how to spell jug.

C - How do you spell jug. Miss?

T - How do you spell BUG (She said it slowly and phonetically.)

C - B-U-G

T - Now spell jug. What's the first sound?

C - J (names letter) no juh

T - Now spell it.

C - Jug

T - Good--Use your head. Try the next one.

The rhyming word pattern is made clear here, but the way the teacher said, "Use your head" made the feedback less positive than it might have been. The teacher in this example, made the process clear but used vague descriptions to articulate achievement.

C - What do I do next?

T - What letter is it?

C - n

T - make good "n's" then all along here (She makes lines to structure the "n's" on the page and makes a "n" as a model.)

Here the teacher gave a model and an example how to set up the page but did not explain what a good “n” consisted of. The teacher did not use whole class lessons for discussion, questioning, modeling and feedback daily, though she did have children show and discuss their art work at the carpet. For example, she discussed why it was important to wait until one colour had dried before adding another, and showed a child’s work as a good example of this. She did not have one group show and discuss the process and result of their work to the class as was seen in other year one classes. She did not use open-ended questioning to make lists or plan steps to complete tasks. It seems that whilst this teacher reported a high importance of formative strategies to her professional practice, observational data, analysis of documents and discourse all suggest less use of such strategies.

Type C--Positive Feedback

The children had been adding two numbers together and had just completed a page of adding three numbers together.

T - This is a little bit harder because you have three numbers to add up. You put the number here. (She demonstrated.) Make you numbers as neatly as you can. Now quiet down now.

C - What about making it with blocks and then put them together and then add up.

T - If you like--that’s good.

Although this example indicates the teacher is describing the process and criteria, the child’s suggestion of a possible method to make the work easier and clearer was not taken up by the teacher. It could have become a Type D feedback response, helping the student construct the way where the child has a role in the emergence of new methods and criteria. The opportunity for formative assessment of a specific kind was missed.

Type C- Specifying Attainment

The teacher included comments directed to why the work was very good.

T - S _____! Excellent work! That gets a star. You've got all the numbers the right way this time.

Type D Feedback

Significantly, there were few clear examples of Type D feedback. Several examples were close but the discussion of student work did not develop into the kind of talk used to mutually articulate achievement or add new criteria or provide strategies for self-regulation for future work, as is outlined by the typology. The teacher did use collaborative language in discussing work. For example, she used the term "we" frequently. When counting out unifix cubes for a math question, she said, "Now how many do we need first?" She proceeded to do the sum step by step with the group as if she were a learner as well. However, the lack of Type D feedback was clear. This could be a result of the type of questions the teacher asked. A review of the transcripts indicated the teacher was most often looking for specific answers to her questions. Her questions were often closed-ended, except in art, in the science experiments and when discussing stories on the carpet. At story time, the teacher's questions were more open-ended involving making inferences, and drawing conclusions. At other times she seemed to be looking for a correct answer.

2. Collects Information on Current Achievement

The teacher said she had portfolios but these appeared to be binders to keep finished work in. The teacher reported that the workbooks were the main record of progress. She wrote some comments in them other than the date and a check mark in red and the comment, "good work". She did not use stickers or stamps to indicate excellence. She had the children grouped into tables and

ensured that work was covered by checking table by table. She did not use a checklist for activities, but would ask tables if they had been to the art table or water table yet in order to check.

In the reading area she and the helper kept anecdotal notes of on-going progress. Each child read with an adult twice a week and the name of the book and one short comment on progress was entered in. (See again Appendix 4.7)

The teacher used her marking time to check individual work in other academic areas but relied on memory to retain this information. Examples include journal writing:

T - (Teacher looks over the work.) Could you read these words to me?
(The child reads and misses a word.) What sound is it? Good--lovely picture.

While the queuing up was a waste of time for some, the teacher was able to talk with many students twice a day; once for math and once for spelling or journal or handwriting. The children appeared to be independent in that they were not to join the queue if more than five children were there. They had to go on with their work and watch the queue as well.

Summary

The first case study teacher's understanding of formative assessment strategies is limited. The range of formative practice is low.

A brief summary of her practice is outlined against the key features of formative assessment that emerged from the review of literature.

Planning

There was some evidence of her use of the National Curriculum for long term planning. Weekly plans were sometimes completed at the end of teaching rather than at the beginning. Weekly plans had to be submitted to the head. These were returned with comments to the teacher, but a copy was kept in the head's files. Assessment/ Evaluation sections of the plans were sometimes

left blank or with general comments such as “Satisfactory work in all areas”.

There was no indication as to the tools or methods used to assess teaching.

There was little evidence that the teacher planned adaptive strategies based on teaching and assessing. No clear evidence of this was observed other than making sure that children had more time if they had not finished and providing more explanation if it was warranted. Similarly the observations of her teaching and an examination of her planning documents gave little indication that information on student learning was used to plan subsequent lessons.

Teaching

Part of formative assessment practice in the teaching phases employs talk to demonstrate criteria specific to learning to the learner. This teacher did not use questioning strategies that might elicit more information about the processes used by pupils and their thinking. However, she did work through examples using talk to explain processes for completing work very often in Maths and language. Questioning seemed to be the weakest area of the practice because the teacher appeared to evaluate and judge what the children said in some way. The children did not offer elaborate descriptions of their work unless the teacher was working with them one on one. The IRF sequence of teacher-student dialogue was very much in use here. This contributed to the strongly teacher-controlled classroom framing, where the teacher held the most significant and powerful role in the classroom.

The teacher used modeling and guided practice in her lessons. Evidence for this practice was seen in language and maths on a one to one basis. The teacher did not in turn observe the results of her guided practice very often and therefore missed information on whether the guided practice had worked or not. For example, she modeled letter formation but did not watch the children write the letters. No real use of exemplars was observed other than to show student work at the end of the lesson. Showing an exemplar is not sufficient to communicate the criteria. Teacher questioning about how the work was

accomplished, why it was done in a certain way and how it might be improved would develop the formative function of the use of exemplar.

Assessing

The literature has identified many types of feedback. An important function of feedback for learning involves information which provides information for improvement and achievement and involves the learner in articulating and constructing the way forward. Little of this type of feedback was observed in this teacher's practice. The feedback given by this teacher was largely corrective and evaluative, with more negative feedback than was seen in other case study classes.

Assessment often makes use of portfolios and samples. Although they are not compulsory at this stage, they can be included in primary classes. The teacher used workbooks as samples of student achievement and as clues to the processes used to complete the work. Portfolios were not used for formative purposes in that the teacher had not heard of the possibility of having a best works discussion to upgrade and change the elements of the portfolio.

Use of standardised or performance assessments integrated into topics and teaching can also be part of formative practice. No evidence was observed of this practice other than the use of the float-sink materials from the SATs. Again, although the materials were used the teacher missed the opportunity to formatively assess the children. She did not observe them at work. She attempted to ask them questions about why some items might float or sink but was so intent on telling them the answer that she did not learn about their current understanding of the concepts of density. Formal and informal observation was used in maths and language but the teacher was not clear as to why she was doing this. She said she wanted to see how they worked but did not appear to follow this up. There were no anecdotal notes completed other than in reading. This format for making notes was designed and instigated by the head teacher. The teacher liked the format but had not adapted it in any way to

another topic or subject. To collect and record information on student achievement, the teacher used the Modbury book of assessment and tick sheets on phonics. Information collected in this way was not used to re-teach or change the overall plan of the lessons.

School Factors as an Influence on Formative Assessment

The school context as described in the head teacher's interview and the Year Two teacher's report suggests that the formative elements of teacher assessment are not well-developed in this school despite the fact that assessment had been the focus of school development for that term. The questionnaire responses support this finding. The head teacher's information indicates that the school is undergoing several whole school improvement initiatives at the same time. The teachers' views, as reported in interview and on questionnaires, suggest that they felt pressure from both the new curriculum and from the changes in the school instituted by the head teacher. The effects of the external and internal pressures are reflected in the teachers' generally low morale at the school. The teachers felt that they were being evaluated or appraised by the head at the same time as they were coping with changes in curriculum and assessment requirements, a difficult school population and, at this point in the school year, the added work of religious activities within a parochial school. It is important to note that no other schools in this research felt unsupported by their head. This distance and lack of communication between the staff and the head teacher was not observed in the other schools. This finding indicates a key difference from the other case study schools whose head teachers saw their roles as a buffer against the sheer magnitude of change required by the curriculum. Though assessment was a focus for school staff development in this school, the teachers were not impressed with the in-service training they received. One teacher accompanied the head to the INSET sessions instead of two teachers. If two teachers had attended the sessions they might have provided a mentoring

relationship for each other as they developed new skills.

Experience in the classroom and ideas from colleagues were both ranked highly as sources of influence. The National Curriculum and INSET were ranked as more moderate influences on assessment skills. Few teachers looked to the NC support documents for guidance. Teacher training was also ranked as a moderate influence on assessment skills. In service training has not been rated as very influential. If this finding is supported by the results of the other case studies, it would be important to determine why pre-service training has not included effective teaching of formative assessment skills.

In Part C of her questionnaire, Miss Stephenson noted that her assessment practices were most influenced by her experience in the classroom and her teacher training, although she said she did not have a course in assessment in her pre-service teacher training. The influence of colleagues was also rated very highly (1). The National Curriculum, Support Materials and INSET are all rated somewhat lower at 3.

The Year One teacher also said she used the National Curriculum Statements "a lot" to decide on a child's achievement but only a little for diagnosing a child's strengths and weaknesses. This suggests she uses it more for summative purposes than formative ones, in contrast to her ratings in the first section of the questionnaire. She said that she has used the examples given in the curriculum to help her with planning, especially since some of the material was new to her. She also wrote that her teaching methods and classroom organisation have been influenced "a lot" by the National Curriculum, while her record-keeping practices have only changed a little. This finding is opposite to what was noted in the other four schools; record-keeping and summative recording of achievement were influenced first and teaching methods changed later and to a lesser degree.

The photocopied rubric of the stages of reading material was supplied by the head teacher and was selected from Children's Work Assessed, a NC

curriculum support document. The document was shown to the teachers in a staff assessment moderation meeting.

Reflections on Case Study One

This teacher did not seem to demonstrate effective use of many formative strategies. At first, this made the analysis very problematic. The ways in which the strategies might be linked or integrated through the three phases of teacher work was not advanced in any substantial way from this case study. However, my understanding of what might constitute a “missed opportunity for formative assessment” became much more developed during the data collection period and this knowledge was instructive in understanding what range of teacher work and thinking might be needed for a strategy to become formative. The case study did suggest a number of questions and issues for further investigation in the second case study.

Teaching Skills

Questioning which results in more student-led dialogue with the teacher and other students seems increasingly relevant. More data on questioning techniques should be collected in the next case study.

Observing children at work and the effective use of performance tasks are skills which required training. This case study teacher carried out some observation but did not use the information in any specific way. Information on the use of observational data should be pursued in the next case study.

The rôle of power in the relationships in the class and its effect on teaching strategies

The teacher used her position of power to control the class. She seemed to have difficulty with discourse techniques and instructional techniques that required a more collegial approach. This became evident when the teacher attempted to use an SAT activity in science. It seemed difficult for her to change or share power with the pupils in an investigative task even when she wanted to.

She could not change the pupils' conception of power for this type of learning task. It appeared that this teacher used the strong framing as a coping strategy given the context of the school, the head teacher and her perception of the behavioural needs of the pupils.

The rôle of guided practice containing feedback which explains and develops the processes needed for completing tasks seems important. It might be included as a new category. This seemed the prevalent form of formative assessment practiced by this teacher and it was integrated with her teaching practice

Implementing changes in teacher practice

The effect of combining change in practice or implementation of a new program cannot be combined with appraisal in any way. The head may have had appropriate goals but his management style thwarted his intentions. Issues of power and control so evident in the classroom reflected the school context as a whole.

Further to this, the influence of the head teacher on the process of change, especially relating development of new assessment practices emerges as an important factor.

Methodology

In terms of methodology, it became very important to confirm questionnaire reports with other source data, especially observation notes and informal interviews during teaching. This teacher's practice did not seem to fully substantiate her questionnaire report in several important ways.

Sub-Appendix B.1 – Minutes of St. Michael's staff meeting

WEDNESDAY 13TH OCTOBER 1993

1. Assessing samples of children's work individually (8 in total)
2. Working in groups to agree levels of Attainment for each sample
3. Discussion of groups' assessments

CONCLUSIONS:-

1. Difficult to assess samples of work without knowing what went before, instructions given by the teacher, or the context for the sample of work.
2. Overlap between A.T.S. & S.O.A. was marked.
3. Working together in groups (Infant & Junior teachers in each group) helped staff to share ideas & focus on the salient parts of the work.
4. It became obvious of need for more evidence/samples of work to be able to form accurate assessments.

FOLLOW-UP:-

1. Staff asked to plan 3 activities for a mixed ability class of between 4 - 6 children over the course of a school week.
2. To record their assessment of the pupil's work on a pro-forma along with examples of the work (& keep their own copies).
3. Assessments to be made of pupil samples which form their portfolios (this attached to the evidence - for discussion later)

Led by John G. M. C. & Diana McGuinness

John outlined his meeting on Assessment, where many aspects of assessment were criticised but gave no concrete suggestions which could be used in class. Conclusion:-

- 1) Need to agree on trial assessment
- 2) Keep evidence
- 3) Long-term planning
- 4) Resources

Diana McGuinness outlined resources for keeping school records, short & long term progress, child evaluation, providing records for staff, parents, governors etc. eg. crisis records.

Whole school assessment policy:- what is needed to be included? Could be kept short but with clear principles. Staff discussed how involved children could be in planning & assessment. Planning should be clear & concise in order to lead to assessment. Individual needs should be met (particularly in regard to statementing).

Establishment of assessment as a constant feature of classroom procedures in relation to (1) teacher assessment & SAT's. Staff discussed what exactly is "evidence", as well as formative & summative assessment, and records of achievement. Staff discussed planning - how it could be streamlined and/or be put together with assessment.

Staff were asked to incorporate special needs in their weekly plans. Tick sheets were discussed as to how useful they could be when used in a classroom. The PLeR was discussed as evidence in class.

Dearing was also discussed, how he wished things to be streamlined. These recommendations are now to be introduced in schools because it was felt that teachers were undertaking too much assessment in school. Staff were given details of an Inset course on Assessment

Assessment at Key Stage 1
 Institute of Education
 Wednesday 3rd November 9am - 12am
 Tutor:- Shirley Clarke

Main Recommendations:-

1. Teachers should keep evidence of "notable achievements" children make in their classroom. The teacher's and pupil's comments should be attached to each piece of work, and it should be dated.
2. There is no statutory obligation to keep evidence for every ~~Statement of Attainment~~ for every Attainment Target. Evidence can be teacher's observations of a child, as well as samples of work.
3. Children should be assessed at a particular level for each curricular area, with reference to the S.O.A. where necessary.
4. There is a need for on-going Agreement Trials, so that teachers can reach a consensus about standards and assessment.
5. A school portfolio should be kept, as a bank, containing evidence for the assessment of the areas of the curriculum at different levels.
6. Planning needs to be linked directly to Assessment and Record-keeping.
7. Schools need to focus more on the quality of teaching and the learning environment, than on the coverage of the National Curriculum.
8. Differentiation needs to be addressed. We need to move each individual child forward from their own level.
9. Schools need to set up resource banks for their topics. Include visits etc. in their planning. Keep records of topics, with sample sheets and comments about how the topic went & suggestions for the future.

Term 1 Sept 1982

Topics: Plants, Food, Christmas, Homes
ATS covered in Term 1

Maths.
AT2, AT3, AT1, AT4, AT5, (AT5 not completed)

completed all.

Science
AT1, AT3, AT2

Geography, AT1, AT2, AT3, AT4.

ENGLISH

AT1, AT2, AT3, AT4, AT5

History
AT1, AT2, AT3

Music
AT1, a b c VII

CDT - AT2.

Art
AT1, c, a, c/9

P.E. large apparatus.

Dance
AT1.

After 1/2 term

Homes / Christmas Drama & performance (etc)

ENGLISH

AT1, AT3

reading AT3 etc.

Maths

AT4,

AT2,

AT3

Science

Geography

AT2,

AT4,

History

AT1,

--

we poured zum cream into ①
2crw-top jal.



tene we past it to eachone
and ~~he~~ did not turn,



in ✓ to butter
on the fifth day
it turned in to butter
milk



and we put zum Sate
in -

butter



Source AT1

Zulukwa
5-11-93

Sub-Appendix B.7 - Year One teacher's anecdotal notes on reading progress

about children's development as a reader

Experiences/support needed to further development

critical response (understanding, evaluating, appreciating wider meanings)

experience to make sense of the book/text

playing with reading using book language reading the pictures focusing on print (directionality, left to right, top to bottom)

- using semantic/syntactic grapho-phonetic cues
- predicting
- self-correcting
- using several strategies or over-dependent on one

kind of involvement in the book

the way in which the child read the text aloud

own text

procedure used: assessment/running a analysis

Look at Butch balls
the little yellow cat and the little brown
The cat
The birthday cake
Read: Itty bitty Can itty

Lad Level 1/5 Read with difficulty
no book bag read "Lad"
Read with difficulty. New
seen

"butterfly"
absent

no book bag read the egg

choose from box 'I am a clown'

no 1:1 correspondence
read again

reading the pictures. no 1:1 correspondence

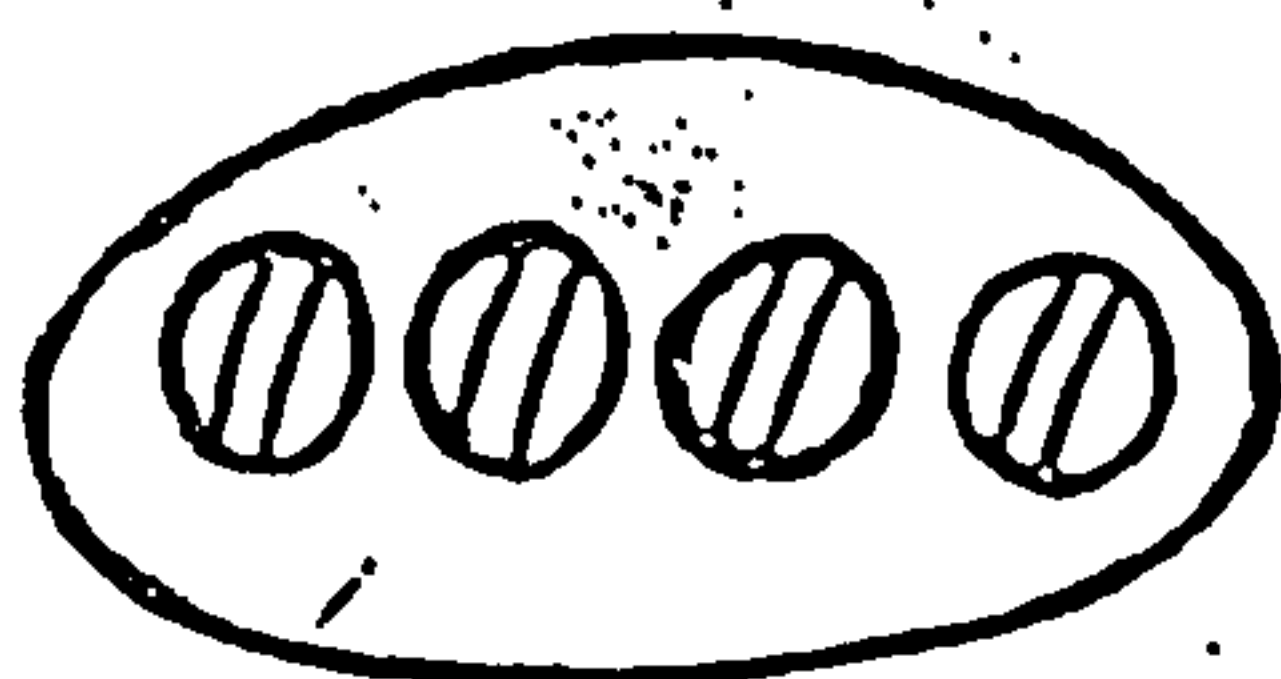
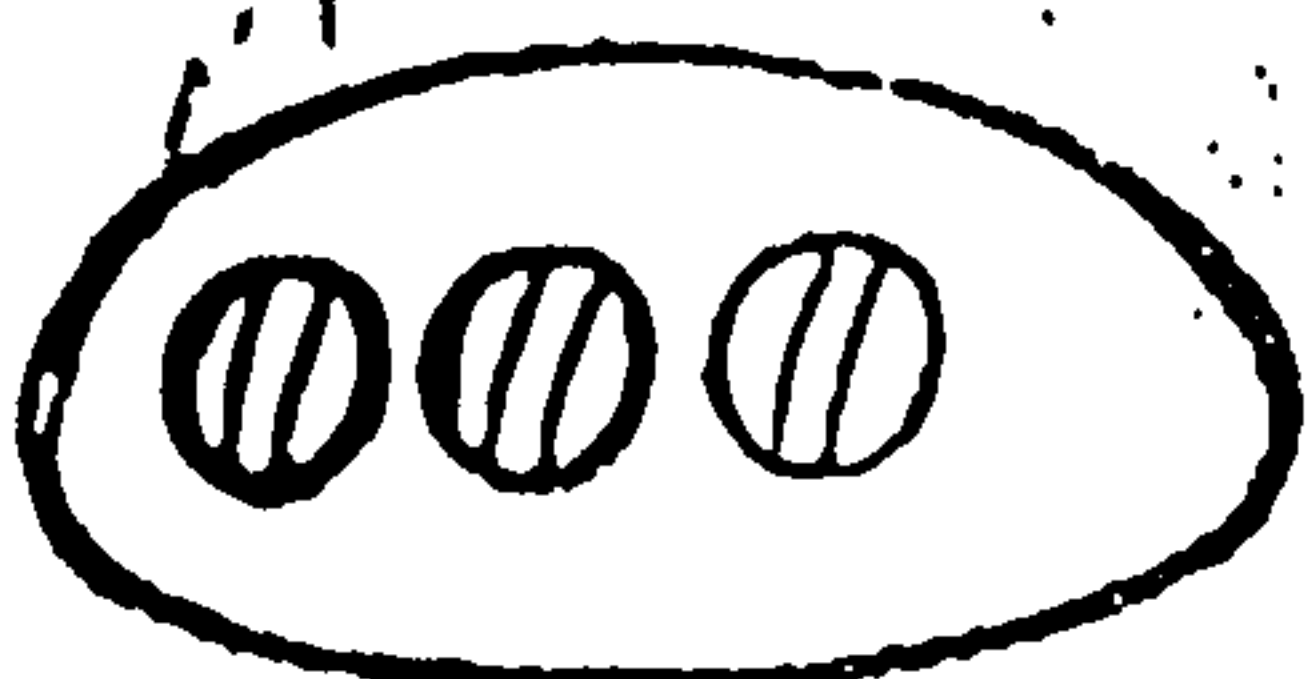
Appendix

Sub-Appendix B.6 - Year One teacher's weekly plan

Date: <u>Nov. 15th</u> Day: <u>Monday</u> Class: <u>Y1</u>				
Curriculum Area	Learning Outcomes	Activities	Organisation / Resources	Evaluation
English	<p>Reading, Writing, Discussion, Preparation for class assembly (TV awards + Pies)</p> <p>Debate: Lambeth Theatre Productions.</p> <p>Headline card</p> <p>Handwriting exercises</p> <p>Spelling</p> <p>Stanzas + Stories</p> <p>Group letterland</p> <p>Group Reading</p> <p>Individual Reading</p>	<p>Spelling pairs</p> <p>Production (Tues. Fri)</p> <p>Group and individual exercises in all areas of language</p>	<p>Prepare speaking prob for Christmas production, suitable for class assembly</p> <p>'Wordsmith' for phonics & rhyming words.</p> <p>Prepare work packs for 'wordsmith' - rhyming sequence</p> <p>Group addition & subtraction</p>	<p>Satisfactory work in all areas of language</p> <p>Independent writing skills have improved greatly.</p> <p>Satisfactory progress in these two areas addition & subtraction.</p>
Maths	<p>Addition to 10</p> <p>Subtraction from 10</p> <p>Counting 11-19</p> <p>Number sequence</p> <p>Domino shapes</p> <p>Time</p>	<p>workbooks</p> <p>workbooks with sheets</p> <p>Group and individual activities in all areas of Maths.</p>		

Sub-Appendix B.8- Year One teacher written feedback on Math

Assignment

name John Smithdate Novembernumber
sheet 5.3

and

4

altogether

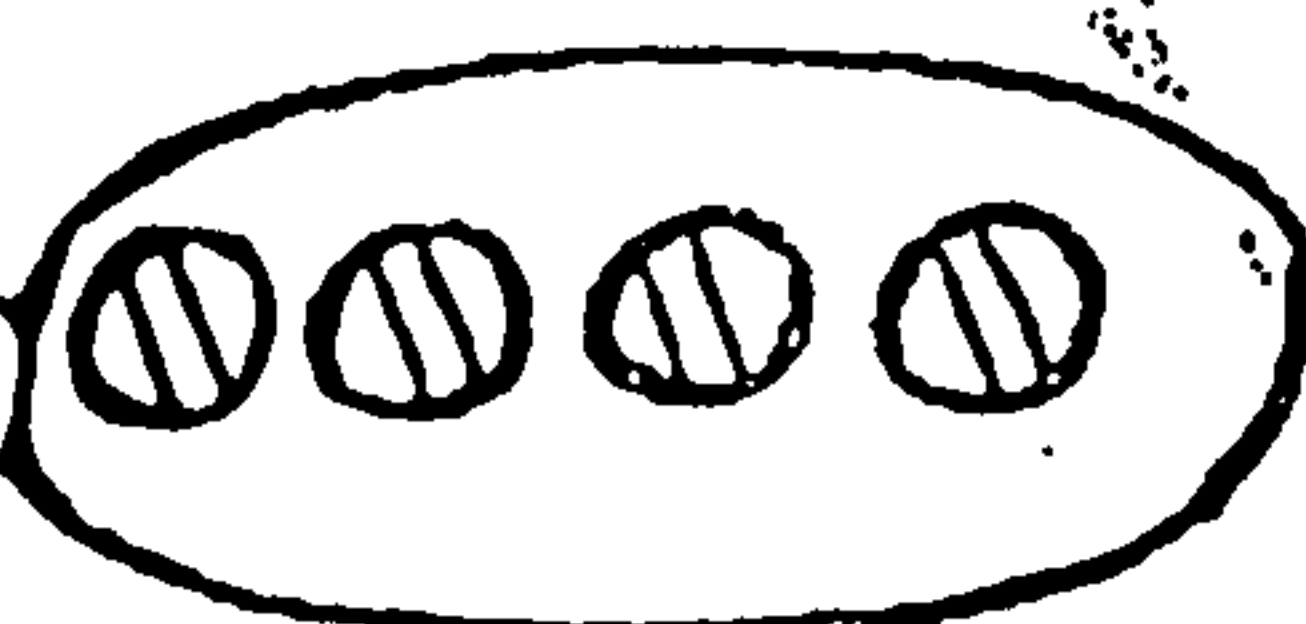
7

We can write the number sentence like this.

$$3 + 4 \rightarrow 7$$

Copy.

$$\underline{3} + \underline{4} \rightarrow \underline{7}$$

4

and

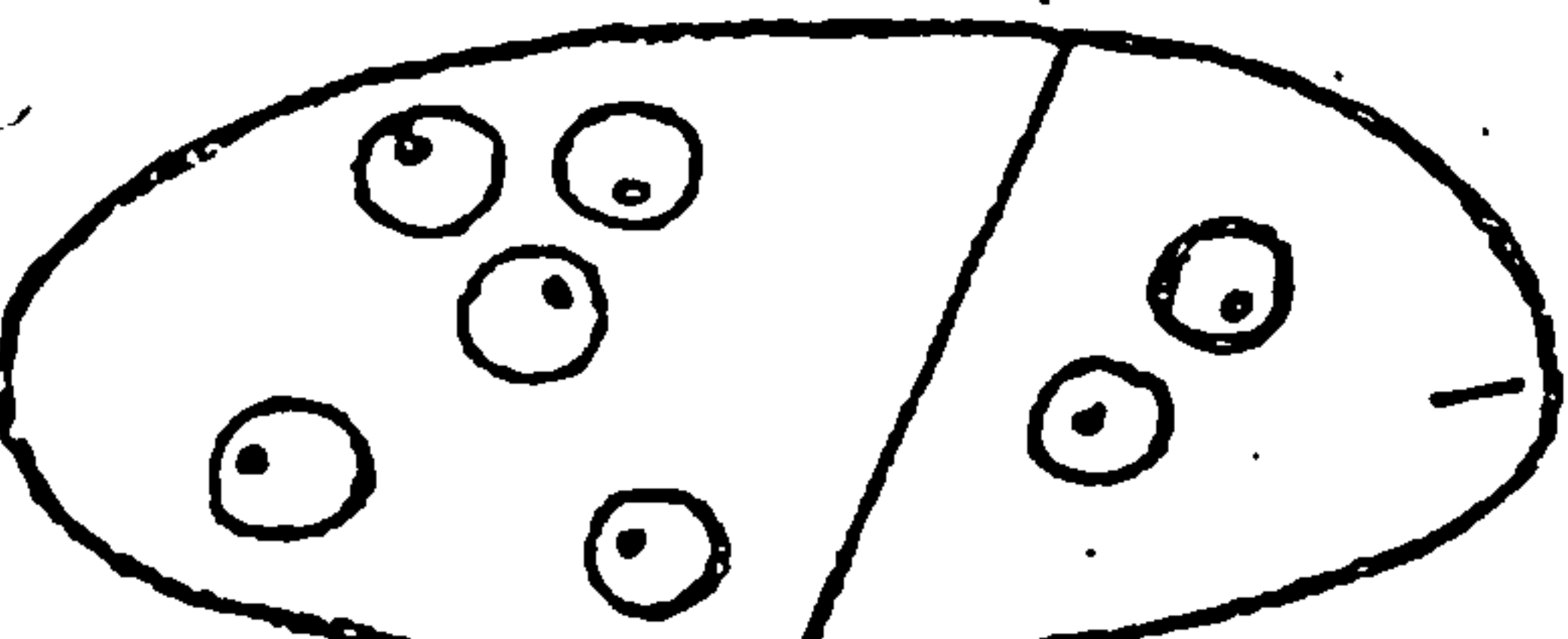
2

altogether

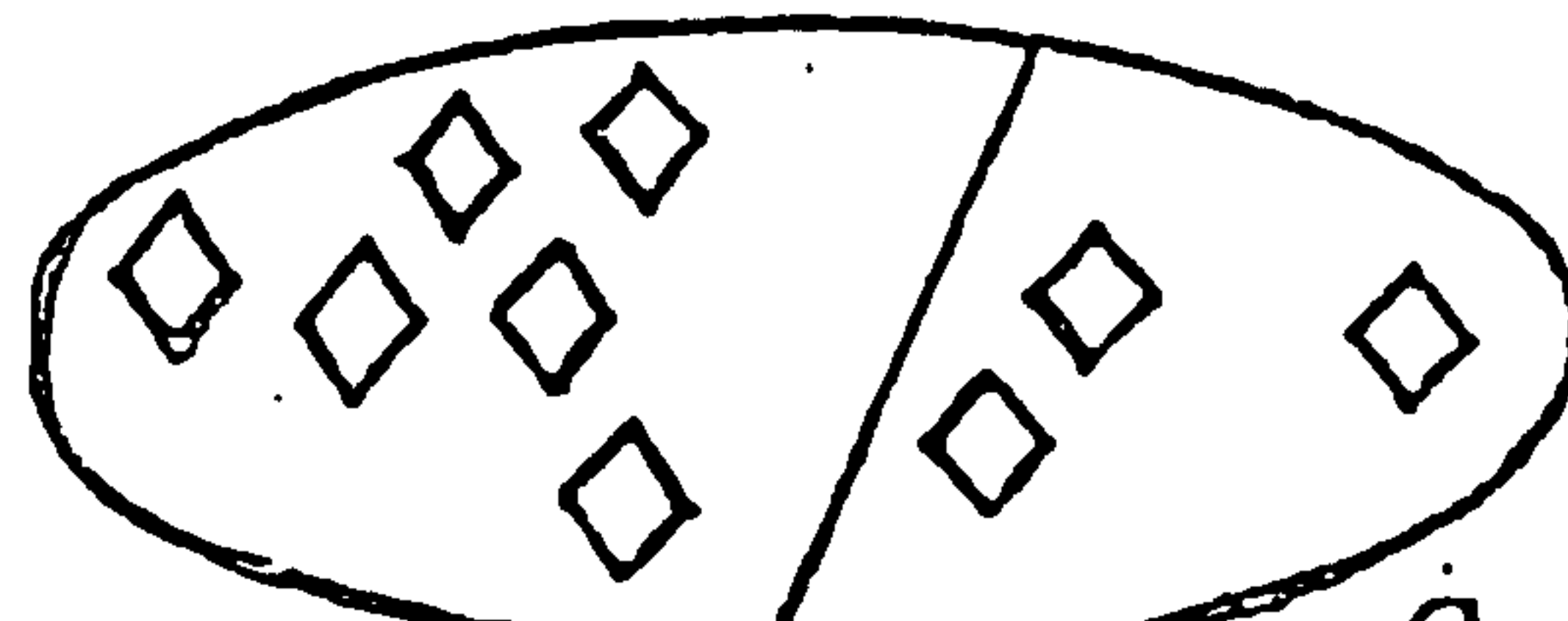
6

Write the number sentence.

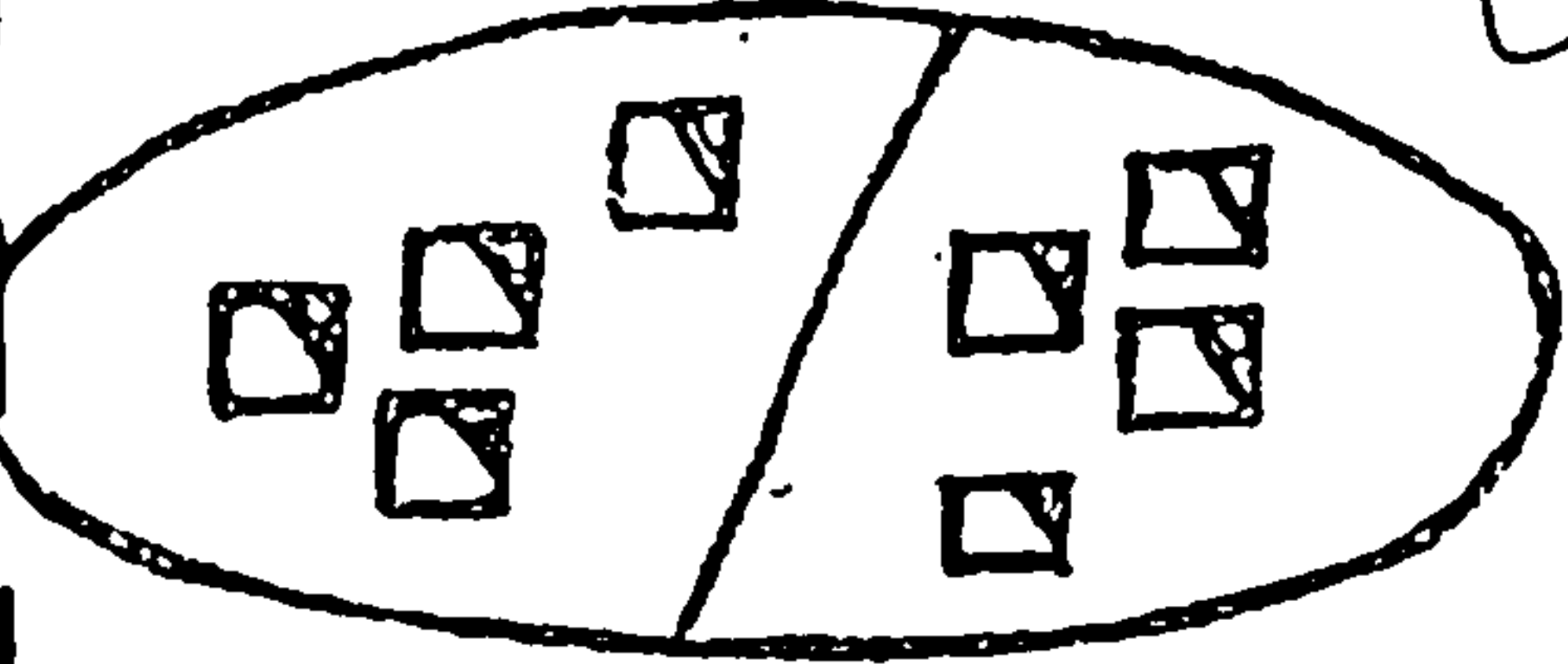
$$\underline{4} + \underline{2} \rightarrow \underline{6}$$



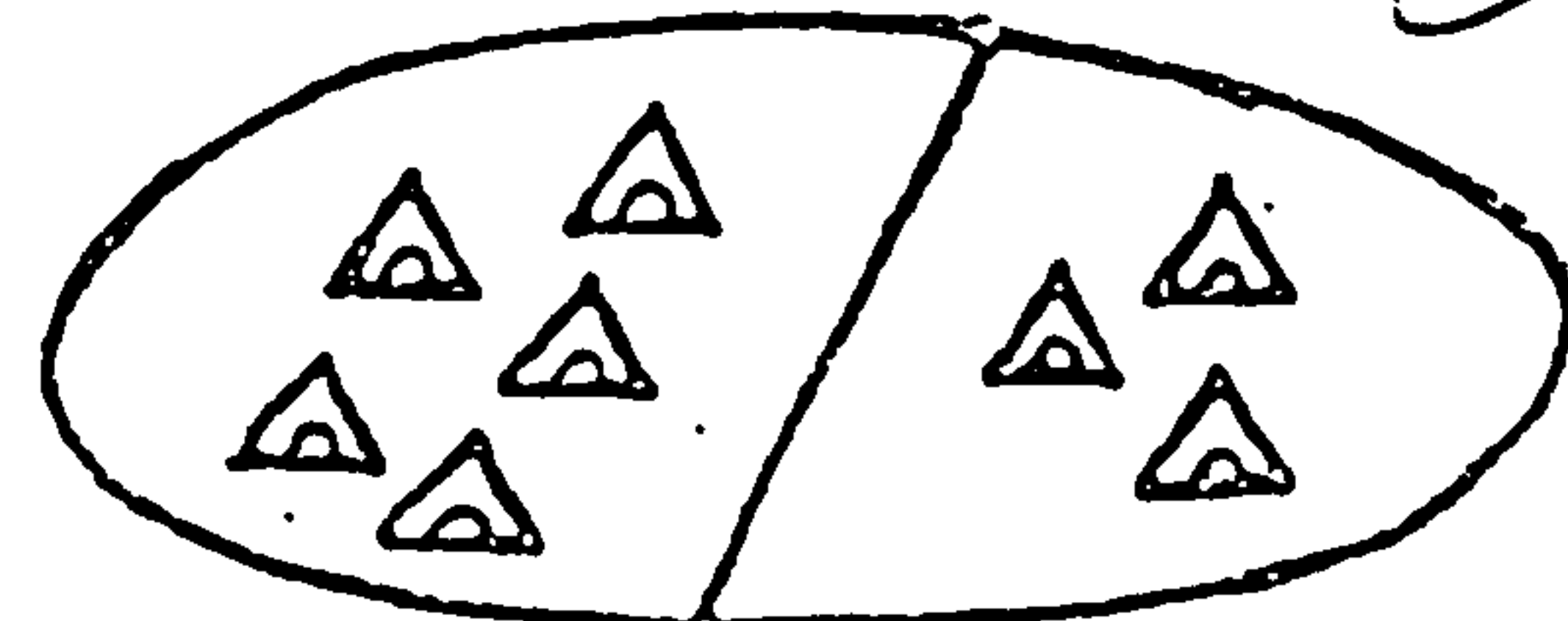
$$5 + 2 \rightarrow 7$$



$$6 + 3 \rightarrow 9$$



$$\underline{4} + \underline{4} \rightarrow \underline{8}$$



$$\underline{5} + \underline{3} \rightarrow \underline{8}$$

